MEMOIR
ON THE
RUINS OF BABYLON.

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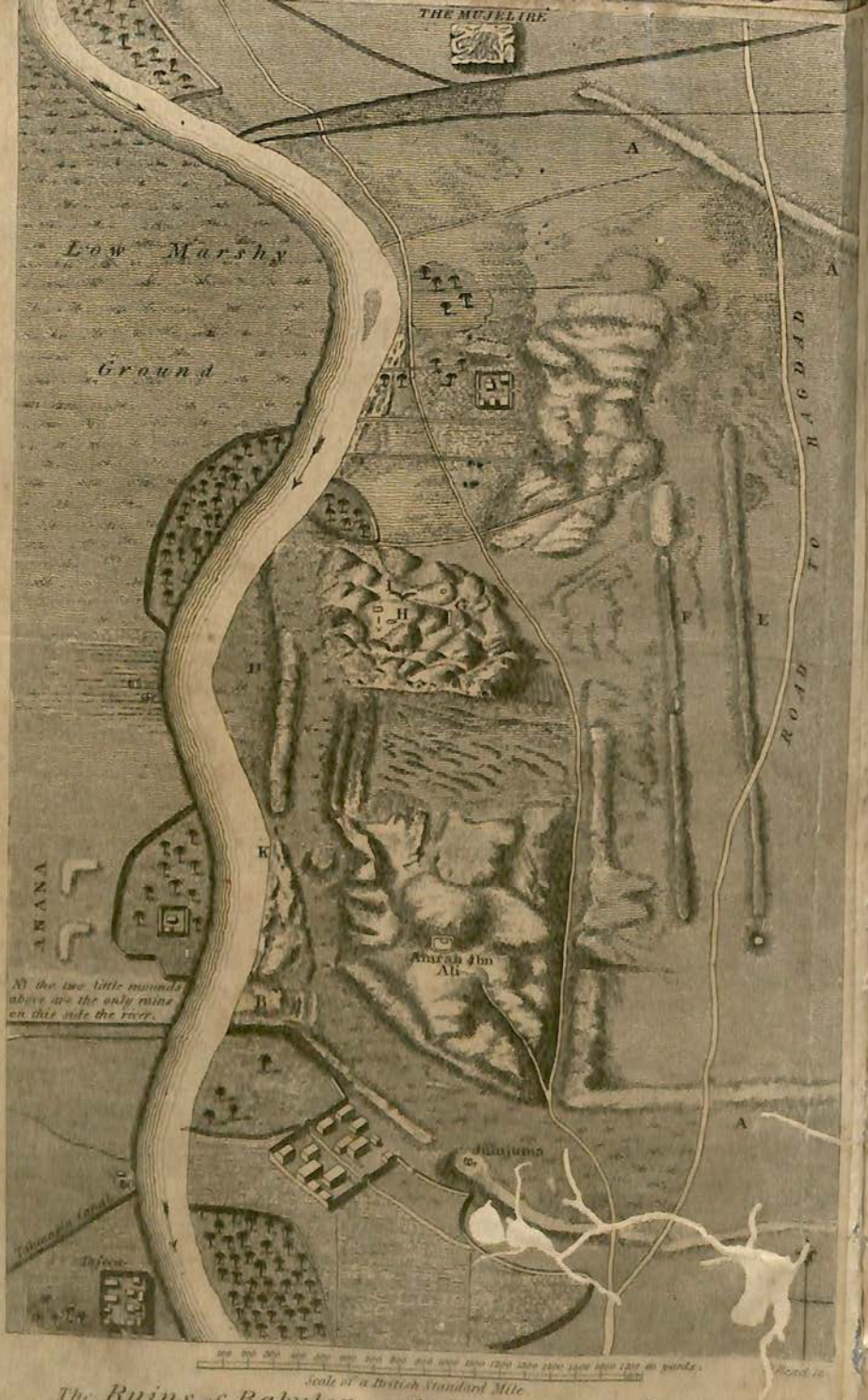

The Ruins of Babylon on the East Bank of the Euphrates.

MEMOIR

ON THE

RUINS OF BABYLON.

88392

BY

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RESIDENT FOR THE HONOURABLE EAST INDIA COMPANY
AT THE COURT OF THE PASHA OF BAGDAD.

WITH THREE PLATES.

THIRD EDITION.

LONDON:
PRINTED FOR LONGMAN, HURST, REES, ORME, AND BROWN, PATERNOSTER ROW; AND J. MURRAY, ALBEMARLE STREET.

1818.

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PRINTED BY RICHARD AND ARTHUR TAYLOR, SHOE LANE.

ADVERTISEMENT.

THE following Memoir was originally published at Vienna, in a Journal entituled *Mines de l'Orient*, conducted by Mr. Hammer a learned Orientalist of that city, at whose request it was composed. It is now republished, though without any instructions from the author, and without the advantage of his correction, in order partly to satisfy curiosity on an interesting subject, but still more to solicit the counsel of the learned in the prosecution of those inquiries, Geographical and Antiquarian, for which the situation of Bagdad furnishes peculiarly favourable opportunities. This Memoir is viewed by the Author as only the first fruits of imperfect research. It may perhaps be

considered with the more indulgence, as it is believed that it is the only account of these memorable ruins hitherto laid before the public by a native of the British Islands.

MEMOIR

ON

THE RUINS OF BABYLON.

THE site of Babylon having never been either thoroughly explored or accurately described, I beg leave to offer to the associates of the *Mines de l'Orient* an account of my observations on that celebrated spot, the completion of which has been retarded by frequent interruptions from indisposition and official occupation.

I have frequently had occasion to remark the inadequacy of general descriptions to convey an accurate idea of persons or places. I found this particularly exemplified in the present instance. From the accounts of modern travellers, I had expected to have found on the site of Babylon more, and less,

than I actually did. Less, because I could have formed no conception of the prodigious extent of the whole ruins, or of the size, solidity, and perfect state, of some of the parts of them; and more, because I thought that I should have distinguished some traces, however imperfect, of many of the principal structures of Babylon. I imagined I should have said, "Here were the walls, and such must have been the extent of the area. There stood the Palace, and this most assuredly was the Tower of Belus."—I was completely deceived: instead of a few insulated mounds, I found the whole face of the country covered with vestiges of building, in some places consisting of brick walls surprisingly fresh, in others merely of a vast succession of mounds of rubbish, of such indeterminate figures, variety, and extent, as to involve the person who should have formed any theory in inextricable confusion.—This, together with the impossibility, in such a remote situation, of referring to all the authorities I should have consulted, will cause my account of the remains of Babylon to appear very meagre and unsatisfactory. I announce no discovery, I advance no interesting hypothesis; I am sensible that to form any thing like a correct judgement, much study and consideration, and frequent visits to the same place, are requisite. As probably more weight may be attached

to my opinions from my residence on the spot, and advantages of observation, than they would otherwise be entitled to, I would rather incur the imputation of being an ignorant and superficial observer, than mislead by forming rash decisions upon subjects so difficult to be properly discussed; and I shall therefore confine myself, in the present memoir, to a plain, minute, and accurate statement of what I actually saw, avoiding all conjectures except where they may tend to throw light on the description, or be the means of exciting others to inquiry and consideration.

I have added a few sketches illustrative of the principal objects, for which I claim no other merit than that of scrupulous fidelity, having been solicitous to render them accurate representations rather than good drawings. For the sake of greater intelligibility in my descriptions, I have added a general sketch of the ground, for the measurements of which I am indebted to a gentleman who accompanied me (Mr. Lockett), who superintended that operation whilst I was employed in drawing and exploring. I project other excursions to the same spot to confirm and prosecute my researches; and preparatory to them I solicit the communications and queries of the learned, for my guidance and information.

An inquiry concerning the foundation of Babylon, and the position of its remains, does not enter into my present plan; the latter subject has been already so ably treated by Major Rennel, in his Geography of Herodotus (a work to which I have often been under obligations, which I take this opportunity of acknowledging), that I shall consider the site of Babylon as established in the environs of Hilla, and commence my description with an account of the country about that place.

The whole country between Bagdad and Hilla is a perfectly flat and (with the exception of a few spots as you approach the latter place) uncultivated waste. That it was at some former period in a far different state, is evident from the number of canals by which it is traversed, now dry and neglected; and the quantity of heaps of earth covered with fragments of brick and broken tiles, which are seen in every direction,—the indisputable traces of former population. At present the only inhabitants of this tract are the Zobeide Arabs, the Sheikh of which tribe is responsible for the security of the road, which is so much frequented that robberies are comparatively seldom heard of. At convenient distances khans or caravanserais are erected for the accommodation of travellers, and to each of them is attached a small village of Fellahs. The first of these

is Kiahya Khan, so called from its founder Ahmed the Kiahya or minister of Suleiman Pasha; it is about seven miles from Bagdad*, and it is rather a handsome building; but from its vicinity to the town it is now unfrequented. The general direction of the Hilla road is north and south.—Assad Khan is the next stage, and is distant from Kiahya Khan about five miles; and between four and five miles to the southward of it the road is intersected by the famous Naher Malcha, or *fluvius regius*, the work, it is said, of Nebuchadnezzar; which is now dry, like many others which I forbear mentioning as being of no importance, though as late as the time of the Caliphs it was applied to the purposes of irrigation. It is confined between two very high mounds, and on the northern one near the road is a small ruin called Sheikh Shoubar, which is visible from afar.

Before arriving at the Naher Malcha, and half way between Assad Khan and the next stage, is a small canal, over which is a bridge of one arch, now ruinous. Some time ago, a large lion came regularly every evening from the banks of the

* I have laid down the distance on the Hilla road by computation and not actual measurement, taking the ordinary walk of a light caravan at three British miles the hour.

Euphrates, and took his stand on this bridge, to the terror of the traveller: he was at last shot by a Zobeide Arab. Till very lately this canal was filled from the Euphrates, and the desert in the vicinity was in consequence cultivated; but the proprietors, finding the exactions of the government to be more than their industry could answer, were obliged to abandon the spot. The next khan, distant upwards of seven miles, is Bir-iunus, or Jonas's well, called by the Turks *Orta Khan,* from its being erroneously counted the half of the distance between Bagdad and Hilla. It is only remarkable for a deep well with a descent by steps to the water, and the tomb of a Turkish saint. Fine hawks, of the species called *Balaban,* used in hunting the antelope, are caught here. Near three miles from this, the road to Kerbela by the bridge of Musseib on the Euphrates branches off from the Hilla road, in the direction of S. 67 W.

Iskenderia is about seven miles from Bir-iunus, and is a large handsome khan, built lately at the expense of Mohammed Hussein Khan, Emin-ed-doulah to the king of Persia, near a former much inferior one of the same name, which is still standing, though deserted. All around it are vestiges of building, which would seem to indicate the prior existence of some large town, and the bricks of

which it is built were dug up on the spot. The first khan on the Kerbela or rather Musseib road, called *Mizrakjeé Oghlou*, from the name of the Bagdad merchant who founded it, is very near this on the same line; and Musseib itself is visible in the direction of S. 80 W. From Iskenderia to Khan Hajee Suleiman (a mean building erected by an Arab) is a distance of upwards of eight miles; and at this khan the road is traversed by a canal cut from the Euphrates at the village of Naseriat (which bears N. 20 W. from the road), and full of water in the spring, as are many of the canals between this and Hilla.

Four miles from Hajee Suleiman is Mohawil, also a very indifferent khan, close to which is a large canal with a bridge over it: beyond this every thing announces an approach to the remains of a large city. The ruins of Babylon may in fact be said almost to commence from this spot, the whole country between it and Hilla exhibiting at intervals traces of building, in which are discoverable burnt and unburnt bricks and bitumen; three mounds in particular attract attention from their magnitude. The ground to the right and left of the road bears the appearance of being partially and occasionally a morass, though at the time we passed it it was perfectly dry: the road, which is due south, lies within a quarter of a mile of the celebrated mass called by

Pietro della Valle the Tower of Belus; Hilla is nine miles from Mohawil, and nearly forty-eight from Bagdad.

Hilla is called by Abulfedá, Hellah Bene Mozeid; he and the Turkish geographer who copies him say it was built, or rather augmented, by Saif-ed-doulah, in the year of the Hejira 495*, in the land of Babel. The Turkish geographer appears to place the ruins of Babylon considerably more to the northward, in the direction of Sura and Felugiah. The district called by the natives El-Aredh Babel extends on both sides the Euphrates. Its latitude, according to Niebuhr, is 32° 28′, and it is situated on the western bank of the Euphrates, a few shops and huts only being on the eastern. It is meanly built, and its population does not exceed between 6 and 7000, consisting of Arabs, and Jews (who have one synagogue), there being no Christians,

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* قال ياقوت في مشترك هي حلة بني مزيد بارض بابل و هي بين بغداد و بين الكوفه قال واول من احتط بها المنازل و عظمها سيف الدوله صدقه بن دبيس بن علي بن مزيد الاسدي في سنه ٤٩٥ قال و كان موضعها قبل ذلك يسمي اللمين
Abulfeda.

حله بغداد ايله كوفه بينندە بوكا حله بني مزيه ديرلر وبو حلهيه اول نزول ايدوب ومنازلي احتطاط ايله بوني تعظيم ايدن سيف الدوله صدقه بن دبيس بن علي بن مزيد الاسدي دركه دورتيوز بشده نزول ايتدي
Djihannuma.

and only such Turks as are employed in the government. It is divided into seven small *mahalles* or parishes; but there is only one mosque in the town, all the other places of worship being mere *ibadetgahs* or oratories. The walls are of mud, and present a truly contemptible appearance; but the present Pasha of Bagdad has ordered a new wall to be constructed of the finest Babylonian bricks. The gates are three in number, and, as usual in the East, each takes the name of the principal place it leads to, the northern one being called the gate of Hussein or Kerbela, the centre that of Tahmasia (a large village in the neighbourhood), and the southern the gate of Nejef or Imam Ali. The little street on the eastern side is also closed by a gate, or rather door. The gardens on both sides the river are very extensive, so that the town itself from a little distance appears embosomed in a wood of date-trees; on the outer verge of the gardens on the west, small redans are established, within sight and hearing of each other, in each of which a matchlockman mounts guard at night; and for greater security against the marauders of the Desert, the late Ali Pasha dug an ample trench round the whole, and built a citadel, (which, as usual in these countries, is nothing more than a square inclosure,) in the town, on the bank of the river.

Among the gardens a few hundred yards to the west of the Husseinia gate, is the Mesjid-esshems, a mosque built on the spot where popular tradition says a miracle, similar to that of the prophet Joshua, was wrought in favour of Ali, and from this the mosque derives its appellation. It is a small building, having instead of a minaret an obelisk, or rather hollow cone fretted on the outside like a pine-apple, placed on an octagonal base: this form, which is a very curious one, I have observed in several very old structures, particularly the tomb of Zobeide, the wife of Haroun-al-raschid, at Bagdad; and I am informed it cannot now be imitated. On the top of the cone is a mud cap, elevated on a pole, resembling the cap of liberty. This, they say, revolves with the sun; a miracle I had not the curiosity to verify. The inside of the mosque is supported by rows of short pillars about two feet in girth; from the top of each spring pointed arches, in form and combination resembling in a striking manner the Gothic architecture. It contains nothing remarkable except what the people show as the tomb of the prophet Joshua. This country abounds in pretended tombs of prophets. On the Tigris between Bagdad and Bussora they show the sepulchre of Ezra; twelve miles in the Desert to the south-west of Hilla is that of Ezechiel, and to the southward the tomb of Job: the two

former are places of pilgrimage of the Jews, who do not acknowledge those of Job and Joshua.

The district of Hilla extends from Husseinia (which is a canal leading from the Euphrates near Nusseib to Imam Hussein) on the north to the town of Hasca on the south. It is governed by a Bey, who is always a Turk or Georgian, appointed by the Pasha of Bagdad, from whom the government is farmed for a stipulated yearly sum*. There is also

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* For the information of those who may be curious regarding such subjects, I subjoin a statement of the revenue of Hilla, communicated to me by the Serraf Bashi of the place.

Annual Receipts of the Governor of Hilla.

From the farms and villages	100,000
Duties on rice, corn, &c., grown in the vicinity and passing through the town from the Khezail territory	100,000
Farm of sesame	15,000
——— dyeing	15,000
——— the butchery	6,000
——— silk	4,000
——— tannery	1,000
——— lime kilns	1,500
Collections or *voluntary* contributions levied on the townspeople under various pretexts about three times a year generally	8,000
Miri on the dates	20,000
Paid by the Commandant of Janissaries for his appointment	2,000
Private revenue of the Zabit his own farms, gardens	20,000
Total in piastres Hilla currency	290,500
Add the difference of exchange	50,000
Total in standard Turkish piastres	340,500

a Serdar or commandant of Janissaries, and a Cadi, whose office, unlike any other of the same kind in Turkey, has been continued in the same family for upwards of a century. The inhabitants of Hilla bear a very bad character. The air is salubrious, and the soil extremely fertile, producing great quantities of rice, dates, and grain of different kinds, though it is not cultivated to above half the degree of which it is susceptible.

Public Payments made by him to the Bagdad Government.

To the Pasha	260,000
——— Kiahya Bey	30,000
Total in Turkish piastres	290,000

He also supplies government with 5,500 tagars of corn and barley, in value about 165,000 piastres on the average; but this he levies on the farmers at the rate of 2 tagars for every 5, over and above the rent and imposts of their farms and produce. He must also supply the Pasha's army or any detachment of it that may be in the neighbourhood; fee the most powerful members of government from time to time, and yet be able to lay by a sufficiency not only for his own reimbursement, but also to pay the mulct that is invariably levied on governors when they are removed, however well they may have discharged their duty. And when it is considered that his continuance in office seldom exceeds two or three years, it may well be imagined that he has recourse to secret methods of accumulating wealth, and that the inhabitants of his district are proportionally oppressed. The regulation of this petty government is a just epitome of the general system which has converted some of the finest countries of the world into savage wastes and uninhabitable deserts.

The grand cause of this fertility is the Euphrates, the banks of which are lower and the stream more equal than the Tigris. Strabo says that it was a stadium in breadth at Babylon; according to Rennel, about 491 English feet, or d'Anville's still more reduced scale, 330. Niebuhr says, at Hilla it is 400 Danish feet broad; my measurement by a graduated line at the bridge there brings it to 75 fathoms, or 450 feet; its breadth however varies in its passage through the ruins. Its depth I found to be $2\frac{1}{2}$ fathoms, and the current runs at the medium rate of about two knots, when lowest being probably half a knot less, and when full, a knot more. The Tigris is infinitely more rapid, having a current of near seven knots when at its height. The Euphrates rises at an earlier period than the Tigris; in the middle of the winter it increases a little, but falls again soon after; in March it again rises, and in the latter end of April is at its full, continuing so till the latter end of June. When at its height it overflows the surrounding country, fills the canals dug for its reception, without the slightest exertion of labour, and facilitates agriculture in a surprising degree. The ruins of Babylon are then inundated so as to render many parts of them inaccessible, by converting the valleys among them into morasses. But the most remarkable inundation of the Euphrates is at Feln-

giah, twelve leagues to the westward of Bagdad, where on breaking down the dyke which confines its waters within their proper channel, they flow over the country and extend nearly to the banks of the Tigris, with a depth sufficient to render them navigable for rafts and flat-bottomed boats. At the moment I am now writing (May 24th, 1812) rafts laden with lime are brought on this inundation almost every day from Felugiah, to within a few hundred yards of the northern gate of Bagdad, called the Imam Mousa gate.

The water of the Euphrates is esteemed more salubrious than that of the Tigris. Its general course through the site of Babylon is north and south. I questioned the fishermen who ply on the river respecting its bottom, and they all agreed that bricks and other fragments of building are very commonly found in it. From the gentleness of the current, regularity of the stream, and equal substance of the banks, I am of opinion that the Euphrates would not naturally alter its course in any great degree, certainly not so much as the Tigris, whose variations in a few years are often very considerable. A variety of circumstances may however have caused some alterations. It is evident from what Strabo says, that the neglected state of the canals had considerably injured the original stream, and it is possible that a

part of it might have continued to flow through the channel cut by Cyrus for a long time afterwards*. That some change in the course of the river has taken place, will be hereafter shown.

I have before remarked that the whole of this part of Mesopotamia is intersected by canals (نهر). These are of all ages; and it is not uncommon to see workmen employed in excavating a new canal close to and parallel with an old one, when it might be supposed that the cleansing of the old one would be a work of much less toil. The high embankments of these canals easily impose on the unpractised eye for ruins of buildings, especially when the channel has been filled up by the accession of soil, and I doubt not are the origin of the belief expressed by some travellers, that there are ruins in the gardens of Hilla. Niebuhr and Otter say that remains of walls and edifices are in existence, though enveloped in woods and coppices. Otter in particular observes that the site of Babylon is generally covered with wood: this is certainly incorrect. On the ruins of Babylon there is not a single tree growing, excepting the old one which I shall hereafter have occasion to mention; but in the intervals of the ruins, where

* Vide Rollin, who quotes Arrian, whose work I regret not having at present to refer to.

in all probability no building ever stood, there are some patches of cultivation*. I made the most diligent search all through the gardens, but found not the slightest vestige of ruins, though previously I heard of many,—an example of the value of information resting solely on the authority of the natives. The reason is obvious. Ruins composed, like those of Babylon, of heaps of rubbish impregnated with nitre, cannot be cultivated, and any inferior mound would of course be levelled in making the garden.

In such a soil as that of Babylon it appears surprising how long some of the canals have remained. The Naher Malcha, a work of the Babylonian monarchs, might still be effectually repaired, and it is probable that many of the canals now seen on the site of Babylon may have been in existence when it was a flourishing city. Some of the canals were used for the purpose of navigation, and Alexander took great pains to cleanse and restore those that were out of order. Aristobulus, quoted by Strabo, lib. xvi. page 510, edit. Casaub., says that he went into these canals in a boat, which he steered himself, and inspected the repairs in person, in presence of a mul-

* I am unacquainted with the original work of Mr. Otter, and imagine that the word *coppice* must exist only in the translation, as it is an improper term, the only wood being the date gardens of Hilla, to which certainly the word *coppice* will not apply.

titude of spectators, cleansing the mouths of some which were choked up with mud, and blocking up others. In one instance, where the canal led toward the morasses and lakes of the Arabian side, he opened a new mouth thirty stadia from the old one, in a more stony place, to ensure greater durability. He also dug basons for his fleet; and in performing these works, it is said the graves of many of the kings and princes who were buried in the morasses were dug up; by which I understand that the bad state of the canals had caused inundations in the places of sepulture. From the yielding nature of the soil I can readily conceive the ease with which Cyrus dug a trench round the city, sufficient to contain the river (*Cyrop.* lib. vii.). I have not however been able to discover any traces either of this trench, or the lines of circumvallation.

The ruins of the eastern quarter of Babylon commence about two miles above Hilla, and consist of two large masses or mounds connected with and lying north and south of each other, and several smaller ones which cross the plain at different intervals. The northern termination of this plain is Pietro della Valle's ruin, from the south-east angle of which (to which it evidently once joined, being only obliterated there by two canals,) proceeds a narrow ridge or mound of earth, wearing the appearance of hav-

ing been a boundary wall. Vide the annexed plan (A). This ridge forms a kind of circular inclosure, and joins the south-east point of the most southerly of the two grand masses.

The river bank is skirted by a ruin (B), which I shall, for perspicuity's sake, call its embankment, though, as will hereafter be seen, there is good reason for supposing it never was intended for one. It commences on a line with the lower extremity of the southernmost grand mound, and is there nearly three hundred yards broad at its base, from the east angle of which a mound (resembling the boundary A, but broader and flatter,) proceeds, taking a sweep to the south-east, so as to be nearly parallel with, and forty yards more to the south than, that boundary; this loses itself in the plain, and is in fact the most southerly of all the ruins. The embankment is continued in a right line to the north, and diminishes in breadth, but increases in elevation till at the distance of seven hundred and fifty yards from its commencement, where it is forty feet perpendicular height, and is interrupted by a break (C) nearly of the same breadth with the river; at this point a triangular piece of ground commences, recently gained from the river, which deserts its original channel above and returns to it again here; this gained ground (D) is a hundred and ten yards in length,

ASIATIC

and two hundred and fifty in breadth at its angle or point, and along its base are traces of a continuation of the embankment, which is there a narrow line that soon loses itself. Above this the bank of the river affords nothing worthy of remark; for though in some places there are slight vestiges of building, they were evidently not connected with the above-mentioned embankment.

The whole of the area inclosed by the boundary on the east and south, and river on the west, is two miles and six hundred yards in breadth from east to west, (exclusive of the gained ground which I do not take into account, as comprising no part of the ruins,) as much from Pietro della Valle's ruin to the southern part of the boundary (A), or two miles and one thousand yards to the most southerly mound of all, which has been already mentioned as branching off from the embankment. This space is again longitudinally subdivided into nearly half, by a straight line of the same kind with the boundary, but much its inferior in point of size (B). This may have crossed the whole inclosure from north to south, but at present only a mile of it remains. Exactly parallel with it, and a little more than a hundred yards to the west of it, is another line precisely of a similar description, but still smaller and shorter (F): its northern termination is a high heap of rubbish of a curi-

ous red colour, nearly three hundred yards long and one hundred broad, terminating on the top in a ridge: it has been dug into in various parts, but few or no fine whole bricks have been found in it*. All the ruins of Babylon are contained within the western division of the area, *i. e.* between the innermost of these lines and the river, there being vestiges of building in the eastern or largest division between the outermost line and the external boundary.

Before entering into a minute description of the ruins, to avoid repetition, it is necessary to state that they consist of mounds of earth, formed by the decomposition of building, channelled and furrowed by the weather, and the surface of them strewed with pieces of brick, bitumen, and pottery.

On taking a view of the ruins from south to north, the first object that attracts attention is the low mound connected with the embankment; on it are two little parallel walls close together, and only a few feet in height and breadth, which bear indisputable marks of having formed part of a Mohame-

* I saw one found at the foot of this heap, which had an impression resembling the spade or shovel in use at present among the Arabs. This is a singular specimen, as I never saw an instance of any other impression than that of writing on a Babylonian brick. I therefore made a drawing of it, which will be given in its proper place.

tan oratory or *Koubbè*. This ruin is called *Jumjuma* (Calvary), and gives its name to a village a little to the left of it. The Turkish Geographer says, "To the north of Hilla on the river is Jumjuma, which is the burial place of a Sultan." جمجمة is the common name here for a skull. It also means, according to Castell and Golius, "Puteus in loco salsugi-noso fossus." Either etymology would be applicable to this. To this succeeds the first grand mass of ruins, which is one thousand one hundred yards in length, and eight hundred in greatest breadth, its figure nearly resembling that of a quadrant: its height is irregular; but the most elevated part may be about fifty or sixty feet above the level of the plain, and it has been dug into for the purpose of procuring bricks. Just below the highest part of it is a small dome in an oblong inclosure, which, it is pretended, contains the body of a son of Ali, named Amran, together with those of seven of his companions, all slain at the battle of Hilla. Unfortunately for the credit of the tradition, however, it is proved on better authority to be a fraud not uncommon in these parts, Ali having had no son of this description. From the most remarkable object on it, I shall distinguish this mound by the name of Amran.

On the north is a valley of five hundred and fifty

yards in length, the area of which is covered with tussocks of rank grass, and crossed by a line of ruins of very little elevation. To this succeeds the second grand heap of ruins, the shape of which is nearly a square, of seven hundred yards length and breadth, and its south-west angle is connected with the north-west angle of the mounds of Amran by a ridge of considerable height and nearly one hundred yards in breadth. This is the place where Beauchamp made his observations, and it is certainly the most interesting part of the ruins of Babylon: every vestige discoverable in it declares it to have been composed of buildings far superior to all the rest which have left traces in the eastern quarter: the bricks are of the finest description; and notwithstanding this is the grand storehouse of them, and that the greatest supplies have been and are now constantly drawn from it, they appear still to be abundant. But the operation of extracting the bricks has caused great confusion, and contributed much to increase the difficulty of decyphering the original design of this mound, as in search of them the workmen pierce into it in every direction, hollowing out deep ravines and pits, and throwing up the rubbish in heaps on the surface. In some places they have bored into the solid mass, forming winding caverns and subterranean passages, which, from their being left

without adequate support, frequently bury the workmen in the rubbish. In all these excavations walls of burnt brick laid in lime mortar of a very good quality are seen; and in addition to the substances generally strewed on the surfaces of all these mounds we here find fragments of alabaster vessels, fine earthen ware, marble, and great quantities of varnished tiles, the glazing and colouring of which are surprisingly fresh. In a hollow near the southern part I found a sepulchral urn of earthen ware, which had been broken in digging, and near it lay some human bones which pulverized with the touch.

To be more particular in my description of this mound, not more than two hundred yards from its northern extremity is a ravine (G) hollowed out by those who dig for bricks, in length near a hundred yards, and thirty feet wide by forty or fifty deep. On one side of it a few yards of wall remain standing, the face of which is very clean and perfect, and it appears to have been the front of some building. The opposite side is so confused a mass of rubbish, that it should seem the ravine had been worked through a solid building. Under the foundations at the southern end an opening is made, which discovers a subterranean passage floored and walled with large bricks laid in bitumen, and covered over with pieces of sand stone, a yard thick and several

yards long, on which the whole being so great as to have given a considerable degree of obliquity to the side walls of the passage. It is half full of brackish water (probably rain water impregnated with nitre in filtering through the ruins, which are all very productive of it), and the workmen say that some way on it is high enough for a horseman to pass upright: as much as I saw of it, it was near seven feet in height, and its course to the south. This is described by Beauchamp (vide Rennel, p. 369), who most unaccountably imagines it must have been part of the city wall. The superstructure over the passage is cemented with bitumen, other parts of the ravine with mortar, and the bricks have all writing on them. The northern end of the ravine appears to have been crossed by an extremely thick wall of yellowish brick cemented with a brilliant white mortar, which has been broken through in hollowing it out; and a little to the north of it I discovered what Beauchamp saw imperfectly, and understood from the natives to be an idol (Rennel, ibid.). I was told the same thing, and that it was discovered by an old Arab in digging, but that not knowing what to do with it, he covered it up again *.

* It is probable that many fragments of antiquity, especially of the larger kind, are lost in this manner. The inhabitants call all stones with inscriptions or figures on them *Idols* صنم

On sending for the old man who pointed out the spot, I set a number of men to work, who after a day's hard labour laid open enough of the statue to show that it was a lion of colossal dimensions standing on a pedestal of a coarse kind of gray granite and of rude workmanship; in the mouth was a circular aperture into which a man might introduce his fist.

A little to the west of the ravine at (H) is the next remarkable object, called by the natives the Kasr, or Palace, by which appellation I shall designate the whole mass. It is a very remarkable ruin, which being uncovered, and in part detached from the rubbish, is visible from a considerable distance, but so surprisingly fresh in its appearance, that it was only after a minute inspection I was satisfied of its being in reality a Babylonian remain. It consists of several walls and piers (which face the cardinal points) eight feet in thickness, in some places ornamented with niches, and in others strengthened by pilasters and buttresses built of fine burnt brick (still perfectly clean and sharp), laid in lime-cement of such tenacity that those whose business it is have given up working, on account of the extreme difficulty of extracting them whole. The tops of these walls are broken, and may have been much higher. On the outside they have in some places been cleared

nearly to the foundations; but the internal spaces formed by them are yet filled with rubbish in some parts almost to their summit. One part of the wall has been split into three parts and overthrown as if by an earthquake; some detached walls of the same kind, standing at different distances, show what remains to have been only a small part of the original fabrick: indeed it appears that the passage in the ravine, together with the wall which crosses its upper end, were connected with it. There are some hollows underneath, in which several persons have lost their lives; so that no one will now venture into them, and their entrances have now become choked up with rubbish. Near this ruin is a heap of rubbish, the sides of which are curiously streaked by the alternation of its materials, the chief part of which it is probable was unburnt brick, of which I found a small quantity in the neighbourhood, but no reeds were discoverable in the interstices. There are two paths near this ruin, made by the workmen who carry down their bricks to the river side, whence they are transported by boats to Hilla; and a little to the north-north-east of it is the famous tree which the Natives call *Athelè*, and maintain to have been flourishing in ancient Babylon, from the destruction of which they say God purposely preserved it, that it might afford Ali a convenient place to tie up his

horse after the battle of Hilla! It stands on a kind of ridge, and nothing more than one side of its trunk remains (by which it appears to have been of considerable girth); yet the branches at the top are still perfectly verdant, and gently waving in the wind produce a melancholy rustling sound. It is an evergreen, something resembling the *lignum vitæ*, and of a kind, I believe, not common in this part of the country, though I am told there is a tree of the same description at Bassora.

All the people of the country assert that it is extremely dangerous to approach this mound after night-fall, on account of the multitude of evil spirits by which it is haunted.

It will not be necessary to describe the inferior heaps, which cross the plain between the two principal mounds and the inner line (F), and whose form and extent will be sufficiently apparent from the accompanying sketch: but, previous to giving an account of the last grand ruin, I shall say a few words more on the embankment of the river, which is separated from the mounds of Amran and the Kasr by a winding valley or ravine a hundred and fifty yards in breadth, the bottom of which is white with nitre, and apparently never had any buildings in it, except a small circular heap in the centre of it near the point (C). The whole embankment on

the river side is abrupt, perpendicular, and shivered by the action of the water; at the foot of the most elevated and narrowest part of it (K), cemented into the burnt brick wall of which it is composed, are a number of urns filled with human bones which had not undergone the action of fire. The river appears to have encroached here, for I saw a considerable quantity of burnt bricks and other fragments of building in the water.

A mile to the north of the Kasr, or full five miles distant from Hilla, and nine hundred and fifty yards from the river bank, is the last ruin of this series, which has been described by Pietro della Valle, who determines it to have been the Tower of Belus, an opinion adopted by Rennel. The natives call it Mukallibe (مقلبه), or, according to the vulgar Arab pronunciation of these parts, Mujelibè, meaning overturned; they sometimes also apply this term to the mounds of the Kasr. It is of an oblong shape, irregular in its height and the measurement of its sides, which face the cardinal points; the northern side being two hundred yards in length, the southern two hundred and nineteen, the eastern one hundred and eighty-two, and the western one hundred and thirty-six; the elevation of the south-east or highest angle, one hundred and forty-one feet. The western face, which is the least elevated, is the most

interesting on account of the appearance of building it presents. Near the summit of it appears a low wall, with interruptions, built of unburnt bricks mixed up with chopped straw or reeds, and cemented with clay-mortar of great thickness, having between every layer a layer of reeds; and on the north side are also some vestiges of a similar construction. The south-west angle is crowned by something like a turret or lantern: the other angles are in a less perfect state, but may originally have been ornamented in a similar manner. The western face is lowest and easiest of ascent, the northern the most difficult. All are worn into furrows by the weather; and in some places, where several channels of rain have united together, these furrows are of great depth, and penetrate a considerable way into the mound. The summit is covered with heaps of rubbish, in digging into some of which, layers of broken burnt brick cemented with mortar are discovered, and whole bricks with inscriptions on them are here and there found: the whole is covered with innumerable fragments of pottery, brick, bitumen, pebbles, vitrified brick or scoria, and even shells, bits of glass, and mother of pearl. On asking a Turk how he imagined these latter substances were brought there, he replied, without the least hesitation, "By the deluge." There are many dens of wild beasts in various parts,

in one of which I found the bones of sheep and other animals, and perceived a strong smell like that of a lion. I also found quantities of porcupine quills, and in most of the cavities are numbers of bats and owls. It is a curious coincidence that I here first heard the oriental account of satyrs! I had always imagined the belief of their existence was confined to the mythology of the West: but a Chôadar, who was with me when I examined this ruin, mentioned by accident, that in this desert an animal is found resembling a man from the head to the waist, but having the thighs and legs of a sheep or goat: he said also that the Arabs hunt it with dogs, and eat the lower parts, abstaining from the upper on account of their resemblance to those of the human species. "But wild beasts of the desert shall lie there, and their houses shall be full of doleful creatures; and owls shall dwell there, and satyrs shall dance there." Isaiah xiii. 21.*

* I with difficulty refrain from transcribing the whole of this most spirited and poetical chapter. The Hebrew word which we translate *satyrs* is שְׂעִירִים literally "the hairy ones," a signification which has been preserved in the Vulgate. In Lev. xvii. 7. the word is used for "devils, evil spirits." The present Jews understand it in this place as synonymous with שֵׁדִים or demons. I know not why we introduced the word *satyrs*,—probably on the authority of Aben Ezra, or some other commentator,—but we should have been cautious how we made the Prophet in a man-

In the northern face of the Mujelibè, near the summit, is a niche or recess high enough for a man to stand upright in, at the back of which is a low aperture leading to a small cavity, whence a passage branches off to the right, sloping upwards in a westerly direction, till it loses itself in the rubbish. The natives call this the serdaub or cellar; and a respectable person informed me that four years ago some men searching in it for bricks pulled out a quantity of marble, and afterwards a coffin of mulberry wood containing a human body inclosed in a tight wrapper, and apparently partially covered with bitumen, which crumbled into dust soon after exposure to the air. This account, together with its appearing the most favourable spot to ascertain something of the original plan of the whole, induced me to set twelve men to work to open a passage into the serdaub from above. They dug into a shaft or hollow pier, sixty feet square, lined with fine brick laid in bitumen, and filled up with earth: in this they found a brass spike, some earthen vessels (one of which was very thin, and had the remain of fine white varnish on the out-

ner accountable for a fabulous being. Since the above was written I find that the belief of the existence of satyrs is by no means rare in this country. The Arabs call them Sied Assad, and say that they abound in some woody places near Semava on the Euphrates.

side), and a beam of date-tree wood. On the third day's work they made their way into the opening, and discovered a narrow passage nearly ten feet high half filled with rubbish, flat on the top, and exhibiting both burnt and unburnt bricks; the former with inscriptions on them, and the latter, as usual, laid with a layer of reeds between every row, except in one or two courses near the bottom, where they were cemented with bitumen; a curious and unaccountable circumstance. This passage appeared as if it originally had a lining of fine burnt brick cemented with bitumen, to conceal the unburnt brick, of which the body of the building was principally composed. Fronting it is another passage (or rather a continuation of the same to the eastward, in which direction it probably extends at considerable distance, perhaps even all along the northern front of the Mujelibè) choked up with earth, in digging out which I discovered near the top a wooden coffin containing a skeleton in high preservation. Under the head of the coffin was a round pebble; attached to the coffin on the outside a brass bird, and inside an ornament of the same material, which had apparently been suspended to some part of the skeleton. These, could any doubt remain, place the antiquity of the skeleton beyond all dispute. This being extracted, a little further in the rubbish, the

skeleton of a child was found; and it is probable that the whole of the passage, whatever its extent may be, was occupied in a similar manner. No skulls were found, either here or in the sepulchral urns at the bank of the river.

At the foot of the Mujelibè, about seventy yards from it, on the northern and western sides, are traces of a very low mound of earth, which may have formed an inclosure round the whole. Further to the north of the river, there are no more vestiges of ruins; but the heaps in the direction of the Bagdad road shall be examined more particularly at a future opportunity.

I have now done with the eastern side of the river, and shall next proceed to take a survey of all that remains of Babylon on the western. The loose and inaccurate accounts of some modern travellers have misled D'Anville and Rennel into the belief of there being considerable ruins on the western bank of the river, corresponding with those I have just described on the eastern. That this is not the case, I was satisfied by the view I obtained from the top of the Mujelibè; yet I determined, for greater accuracy, to examine the whole bank minutely. It is flat, and intersected by canals, the principal of which are the Tajia or Ali Pasha's trench, and the canal of Tahmasia. There are a few small villages on the river

inclosed by mud walls, and surrounded by cultivation; but there is not the slightest vestige of ruins, excepting opposite the mass of Amran, where are two small mounds of earth overgrown with grass, forming a right angle with each other, and a little further on are two similar ones. These do not exceed a hundred yards in extent, and the place is called by the peasants *Anana*. To the north the country has a verdant marshy appearance.

But although there are no ruins in the immediate vicinity of the river, by far the most stupendous and surprising mass of all the remains of Babylon is situated in this desert, about six miles to the south-west of Hilla. It is called by the Arabs *Birs Nemroud**, by the Jews *Nebuchadnezzar's Prison*, and has been described both by Père Emanuel and Niebuhr (who was prevented from inspecting it closely by fear of the Arabs), but I believe it has not been noticed

* The etymology of the word *Birs* (برس) would furnish a curious subject for those who are fond of such discussion. It appears not to be Arabic, as it has no meaning which relates to this subject in that language, nor can the most learned persons here assign any reason for its being applied to this ruin. בִּירָה בִּירְתָּא in Chaldean signifies *a palace*, and הַבִּירָה *par excellence*, the Temple of Jerusalem. בִּרְיָן in the same language, and برّاص pl. برصة Ar. mean, the habitation of dæmons, or a sandy desert.

by any other traveller. Rennel, on the authority of D'Anville, admits Père Emanuel's ruin into the limits of Babylon, but excludes Niebuhr's, which he says cannot be supposed to have been less than two or three miles from the south-west angle of the city. No one who had not actually examined the spot could ever imagine them in fact to be one and the same ruin.

I visited the Birs under circumstances peculiarly favourable to the grandeur of its effect. The morning was at first stormy, and threatened a severe fall of rain; but as we approached the object of our journey, the heavy clouds separating discovered the Birs frowning over the plain, and presenting the appearance of a circular hill crowned by a tower with a high ridge extending along the foot of it. Its being entirely concealed from our view during the first part of our ride, prevented our acquiring the gradual idea, in general so prejudicial to effect, and so particularly lamented by those who visit the Pyramids. Just as we were within the proper distance, it burst at once upon our sight in the midst of rolling masses of thick black clouds, partially obscured by that kind of haze whose indistinctness is one great cause of sublimity, whilst a few strong catches of stormy light, thrown upon the desert in the back ground, served to give some idea of the immense

extent and dreary solitude of the wastes in which this venerable ruin stands.

The Birs Nemroud is a mound of an oblong figure, the total circumference of which is seven hundred and sixty-two yards. At the eastern side it is cloven by a deep furrow, and is not more than fifty or sixty feet high; but at the western it rises in a conical figure to the elevation of one hundred and ninety-eight feet, and on its summit is a solid pile of brick, thirty-seven feet high by twenty-eight in breadth, diminishing in thickness to the top, which is broken and irregular, and rent by a large fissure extending through a third of its height. It is perforated by small square holes disposed in rhomboids. The fine burnt bricks of which it is built have inscriptions on them; and so admirable is the cement, which appears to be lime-mortar, that, though the layers are so close together that it is difficult to discern what substance is between them, it is nearly impossible to extract one of the bricks whole. The other parts of the summit of this hill are occupied by immense fragments of brick-work of no determinate figure, tumbled together and converted into solid vitrified masses, as if they had undergone the action of the fiercest fire, or been blown up with gunpowder, the layers of the bricks being perfectly discernible,—a curious fact, and one for which I am utterly inca-

pable of accounting. These, incredible as it may seem, are actually the ruins spoken of by Père Emanuel, who takes no sort of notice of the prodigious mound on which they are elevated*.

It is almost needless to observe that the whole of this mound is itself a ruin, channelled by the weather and strewed with the usual fragments and with pieces of black stone, sand-stone, and marble. In the eastern part layers of unburnt brick are plainly to be seen, but no reeds were discernible in any part: possibly the absence of them here, when they are so generally seen under similar circumstances, may be an argument of the superior antiquity of the ruin. In the north side may be seen traces of building exactly similar to the brick-pile. At the foot of the mound a step may be traced, scarcely elevated above the plain, exceeding in extent by several feet each way the true or measured base; and there is a quadrangular inclosure round the whole, as at the Mujelibè, but much more perfect and of greater dimen-

* "Le P. Emanuel dit avoir vu (dans la partie occidentale) de grands pans de murs encore debout, d'autres renversés, mais d'une construction si solide, qu'il n'est presque pas possible de détacher d'entre eux les carreaux de brique d'un pied et demi de longueur dont on sait que les édifices de Babylone étoient construits. Les Juifs, établis dans le pays, appellent ces restes de bâtisse *la prison de Nabuchadniasser*; il conviendroit mieux de dire *le palais*."—D'Anville sur l'Euphrate et le Tigre, p. 117.

sions. At a trifling distance from the Birs, and parallel with its eastern face, is a mound not inferior to that of the Kasr in elevation, but much longer than it is broad. On the top of it are two Koubbès or oratories, one called Makam Ibrahim Khalil, and said to be the place where Ibrahim was thrown into the fire by order of Nemroud, who surveyed the scene from the Birs; the other, which is in ruins, Makam Saheb Zeman; but to what part of Mehdy's life it relates I am ignorant. In the oratories I searched in vain for the inscriptions mentioned by Niebuhr; near that of Ibrahim Khalil is a small excavation into the mound, which merits no attention; but the mound itself is curious from its position, and correspondence with others, as I shall in the sequel have occasion to remark.

Round the Birs are traces of ruins to a considerable extent. To the north is the canal which supplies Mesjid Ali with water, which was dug at the expense of the Nuwaub Shujahed doulah, and called after his country Hindia. We were informed that from the summit of the Birs, in a clear morning, the gilt dome of Mesjid Ali might be seen.

To this account of the ruins, which are supposed to have stood in the enceinte of the city itself, it may be useful to subjoin a notice of some remarkable places in the vicinity of Hilla, which bear some re-

lation to the ruins of Babylon. Nebbi Eyoub, or the tomb of the prophet Job, is a Koubbè situated near the Euphrates, three leagues to the southward of Hilla; and just below it is a large canal called Jazeria (جازريه), said to be of great antiquity; close to which are two large mounds or masses of ruins named El Mokhatat (المخطط) and El Adouar (الدوار). Four leagues below Hilla, on the same side of the Euphrates, but not on the bank, is a village called Jerbouiya (جربوعيه), near which is a considerable collection of ruins similar to those of Babylon, and called by the natives Boursa (بورسه), probably the Borosippa of Strabo, and Barsita of Ptolemy*. The governor of Hilla informed me of a mound as large as the Mujelibè, situated thirty-five hours to the southward of Hilla; and that a few years ago, a cap or diadem of pure gold, and some other articles of the same metal, were found there, which the Khezail Arabs refused to give up to the Pasha. In the

* בּוֹרְסִיף *quasi* בֵּית שַׁאפִּי in Chaldean, whence the Greek Borosippa, is, according to the Talmuds, the name of the place in Babel near the Tower, whose air renders a man forgetful. I have not yet had leisure to search the Talmud and other Hebrew and Chaldean works for the traditions concerning Babylon, and am unwilling to detain this memoir (which has already been so much and so unexpectedly retarded) any longer for such information; but I have some hopes of being able to make it the subject of a future communication.

western desert bearing north-west from the top of the Mujelibè, is a large mound called Towereij (طويريج). In the same desert, two leagues to the west of Hilla, is the village of Tahmasia, built by Nadir Shah, where, it is said, are some trifling mounds; this village must occupy part of the site of Babylon. From the top of the Mujelibè in a southerly direction, at a great distance, two large mounds are visible, with whose names I am unacquainted. Five or six miles to the east of Hilla is Al Hheimar (الحيمر), which is a curious ruin, as bearing, on a smaller scale, some resemblance to the Birs Nemroud. The base is a heap of rubbish, on the top of which is a mass of red brick-work, between each layer of which is a curious white substance, which pulverizes on the least touch. I have not yet visited Al Hheimar, but those who have, conjectured, from the grain of the white substance or powder, seemingly lying in filaments, that it must have originally been layers of reeds. I have seen a specimen adhering to a piece of brick, but not sufficiently well preserved to enable me to form any decisive judgement; but I cannot imagine how reeds, under any circumstances, could be brought to assume such an appearance; and besides, they are never found in buildings composed, as this is, of burnt brick.

To these ruins I add one, which, though not in

the same direction, bears such strong characteristics of a Babylonian origin, that it would be improper to omit a description of it in this place. I mean Akerkouf (عقرقوف), or, as it is more generally called, Nimrod's Tower, for the inhabitants of these parts are as fond of attributing every vestige of antiquity to Nimrod, as those of Egypt are to Pharaoh. It is situated ten miles to the north-west of Bagdad, and is a thick mass of unburnt brick-work of an irregular shape, rising out of a base of rubbish; there is a layer of reeds between every fifth or sixth (for the number is not regulated) layer of bricks. It is perforated with small square holes, as the brick-work at the Birs Nemroud, and about half way up on the east side is an aperture like a window; the layers of cement are very thin, which, considering it is mere mud, is an extraordinary circumstance. The height of the whole is one hundred and twenty-six feet; diameter of the largest part, one hundred feet; circumference of the foot of the brick-work above the rubbish, three hundred feet; the remains of the tower contain one hundred thousand cubic feet. (Vide Ives's Travels, p. 298.) To the east of it is a dependent mound resembling those at the Birs, and Al Hheimar.

I shall now inquire which of the public works, that conspired with its size to render Babylon so

celebrated among the ancients, was likely to have left the most considerable traces at the present day; and how far the vestiges which may be imagined would have remained, correspond with what we now find.

Of all the ancient writers who have described Babylon, Herodotus and Diodorus are the most minute. Much weight must certainly be placed on the accounts of the former of these historians, who was an eye-witness of what he relates, notwithstanding the exaggeration and credulity which may in some instances be laid to his charge. The accounts of later writers are of comparatively small value. Pliny in particular has done nothing more than copy Herodotus. Strabo's general accuracy and personal experience indeed render his description of great interest, as far as it goes; but he could only have seen Babylon at a period when its public buildings had already become heaps of rubbish, and consequently must have depended upon more ancient authorities for particular accounts of most of them.

The greatest circumference the ancients have ascribed to the city walls, is four hundred and eight stadia; the most moderate, three hundred and sixty. Strabo, who is excellent authority in this particular, as he must have seen the walls in a sufficiently perfect state to form his judgement, allows three hun-

dred and eighty-five; but the smallest computation supposes an area for the city, of which we can now scarcely form an idea. Whatever may have been the size of Babylon, I imagine that its population bore no proportion to it: and that it would convey to a modern the idea of an inclosed district, rather than that of a regular city; the streets, which are said to have led from gate to gate across the area, being no more than roads through cultivated land, over which buildings were distributed in groups or patches. Quintus Curtius says positively that there was pasture and arable land in the inclosure, sufficient to support the whole of the population during a long siege; and Xenophon reports that when Cyrus took Babylon (which event happened at night) the inhabitants of the opposite quarter of the town were not aware of it till the third part of the day, *i. e.* three hours after sun-rise; which was very possibly owing to the great distance of one cluster of houses from another; since, had they been connected with each other in regular streets, the noise and confusion would, I think, have spread the information of the event with much greater rapidity.

All accounts agree in the height of the walls, which was fifty cubits, having been reduced to these dimensions from the prodigious height of three hundred and fifty feet, by Darius Hystaspes, after the

rebellion of the town, in order to render it less defensible. I have not been fortunate enough to discover the least trace of them in any part of the ruins at Hilla; which is rather an unaccountable circumstance, considering that they survived the final ruin of the town, long after which they served as an inclosure for a park; in which comparatively perfect state St. Jerome informs us they remained in his time. Nor can the depredations subsequently committed in them in the building of Hilla, and other similar places, satisfactorily account for their having totally disappeared: for though it is evident they would have been the first object to attract the attention of those who searched after bricks; yet when they had been thoroughly dilapidated, the mass of rubbish, which most probably formed the heart or substance of them, together with the very deep ditch, would alone have left traces sufficiently manifest at the present day.

Similar in solidity and construction to the city walls, was the artificial embankment of the river with its breast-work, the former of which Diodorus informs us was one hundred stadia in length. The traces of these are entirely obliterated: for though on a cursory view the mound which now forms the eastern bank of the river (and which for perspicuity's sake I have called the embankment) would be likely

to deceive observers; yet the alteration in the course of the river at that place, the form of the southern part of the mound, and, above all, the sepulchral urns found built up in it close to the water's edge, are sufficient proofs that it cannot be the remains of the ancient embankment.

The most extraordinary building within the city was the tower, pyramid, or sepulchre of Belus, the base of which Strabo says was a square of a stadium each side, and it was a stadium in height. It has been generally considered that Herodotus has given an extravagant account of its dimensions: he says that the first platform, or largest and lowest of the eight towers of which it was composed, was ὁ σταδιου̃ καὶ τὸ μῆκος καὶ τὸ εὖρος, which has been rendered "a stadium in height and breadth;" which, supposing the seven other towers to have borne some proportion to it, may be clearly pronounced an absurdity: but μῆκος also signifies length, space, prolixity; in this signification it combines better with εὖρος, as length and breadth is a more usual phrase than height and breadth, and the passage then would mean no more than that the base was a square of a stadium.

If a sentence can be interpreted in two different ways, it is surely not fair to charge the author with the worst; and it is possible that, on a critical ex-

amination of the venerable father of history, much of the blame arising from his reputed inaccuracies would be divided between his transcribers and translators*. The tower stood in a quadrangle of two miles and a half, which contained the temple in which divine honours were paid to the tutelar deity of Babylon, and probably also cells for the numerous establishment of priests attached to it.

An additional interest attaches itself to the sepulchre of Belus, from the probability of its identity with the tower which the descendants of Noah, with Belus at their head, constructed in the plain of Shinaar, the completion of which was prevented in so memorable a manner. I am strongly inclined to differ from the sense in which Gen. xi. 4. is commonly understood, and I think too much importance has been attached to the words "*may reach unto heaven,*" which are not in the original, whose words are וְרֹאשׁוֹ בַשָּׁמַיִם "*and its top to the skies,*" by a

* The only passage my memory immediately supplies me with, in which the word μῆκος may also be understood in the way I propose, is the 155th line of the 7th book of the Iliad. Nestor is relating his victory over the giant Ereuthalion; after having stretched him on the plain, he exclaims "Τὸν δὴ μήκιστον καὶ κάρτιστον κτάνον ἄνδρα" evidently with the idea present to him of viewing the space of ground he covered as he lay; for he immediately adds "Πολλὸς γάρ τις ἔκειτο, παρῴορος ἔνθα καὶ ἔνθα." But, I doubt not, better authorities might be easily produced.

metaphor common to all ages and languages, *i. e.* with a very elevated and conspicuous summit. This is certainly a more rational interpretation than supposing a people in their senses, even at that early period, would undertake to scale heaven by means of a building of their own construction. The intention in raising this structure might have been displeasing to the Almighty on many other accounts; such for instance as the paying of divine honours to other beings, or the counteracting of the destined dispersion of mankind. For, notwithstanding the testimony of Josephus's Sibyl, we have no good reason for supposing that the work suffered any damage; and allowing it to have been in any considerable degree of forwardness, it could have undergone no material change at the period the building of Babel was recommenced. It is therefore most probable that its appearance, and the tradition concerning it, gave those who undertook the continuation of the labour, the idea of a monument in honour of Belus; and the same motives which made them persist in adhering to the spot on which such a miracle had been wrought, would naturally enough induce them to select its principal structure for that purpose. Be this as it may, the ruins of a solid building of five hundred feet must, if any traces of the town remain, be the most remarkable object among

them. Pliny, seventy years after Strabo, mentions "the Temple of Jupiter Belus, the inventor of astronomy," as still standing; and all travellers since the time of Benjamin of Tudela, who first revived the remembrance of the ruins, whenever they fancied themselves near the site of Babylon, universally fixed upon the most conspicuous eminence to represent the Tower of Belus. Benjamin of Tudela, Rawulf, and some others, saw it among the ruins of old Feelugiah; and, fully bent upon verifying the words of Scripture, fancied it infested by every species of venomous reptile. If we take Rawulf's account, indeed, he must in the 16th century have seen Babylon nearly as perfect as it was in Strabo's time, and he has no kind of difficulty in pointing out the minutest divisions of the city. I believe Pietro della Valle was the first who selected the Mujelibè as the remains of this celebrated structure. Père Emanuel and Niebuhr are the only writers who have noticed the Birs Nemroud; and the former, from the account he has given, or the clearness of the idea he appears to have formed, might with equal advantage to the world and himself have never seen it.

Notwithstanding the apparent ease with which this important point in the topography of Babylon has been determined, a careful examiner will find as great a difficulty in discovering the Tower of

ASIATIC

Belus, as in identifying any other part of the ruins. Taking for granted the site of Babylon to be in the vicinity of the Hilla, his choice will be divided between two objects, the Mujelibè and the Birs Nemroud. I shall briefly notice the arguments in favour of each, with the difficulties and objections which may be advanced, first giving a comparative statement of their dimensions with those of the original tower.

	English feet.
Total circumference or sum of the four sides of the Birs . . .	2286
Ditto of the Mujelibè . . .	2111
Ditto of the Tower of Belus, taking five hundred feet for the stadium, at a rough calculation . . .	2000

By this it appears that the measurement both of the Birs and the Mujelibè agrees as nearly as possible with that of the Tower of Belus, considering our ignorance of the exact proportion of the stadium, and the enlargement which the base must have undergone by the crumbling of the materials. The variations in the form of the Mujelibè from a perfect square, are not more than the accidents of time will account for; and the reader will best judge from my description, whether the summit and ex-

ternal appearance of this ruin correspond in any way with the accounts of the tower. That there may have been some superstructure on it appears probable, from the irregularity of the summit, and the quantity of burnt brick found there; but it is impossible to decide on the form or extent of this superstructure, and it may be thought that there does not remain in the irregularities on the top, a sufficient quantity of rubbish to account for an elevation equal to that of the tower, the whole height now being only one hundred and forty feet. To those who, from the traces of an inclosure somewhat resembling a ditch with a glacis, and the appearances of lanterns or turrets at one or two of the corners, would conjecture this to be the ruins of a castle, it must be objected that the inclosure which we know surrounded the tower, might leave just such traces; and indeed we observe perfectly similar ones in ruins which we know never could have been castellated, as for instance, at the Birs Al Hheimar and Akerkouf; that the corners of the base of the tower may have been rounded off for ornament or use, and that the interior appearance and solidity of the ruin argue completely against its having been a castle. We have besides every reason to believe that there never was a castle at Babylon, except the fortified palace; and the opinion of a

few Turks, who call it the Kalâa, or citadel, is not worth noticing.

Of the grand inclosure of two miles and half, which surrounded the temple and tower, and was probably the boundary of the sanctuary or holy ground, there are no traces here; and indeed such an inclosure would be incompatible with the boundary-line (A). The passage filled with skeletons in the Mujelibè, is a circumstance that will embarrass equally those who may be of opinion it was a castle, and those who judge it to have been the Tower of Belus; though probably it would be more favourable to the theory of the latter than that of the former. We gain nothing in this instance by studying position. Major Rennel considers this ruin as sufficiently answering to the site of the Tower of Belus: he does not however establish its position from that of the other ruins, but assumes it as a datum to ascertain the situation and extent of the rest of Babylon.

The only building which can dispute the palm with the Mujelibè is the Birs Nemroud, previous to visiting which I had not the slightest idea of the possibility of its being the Tower of Belus; indeed its situation was a strong argument against such a supposition: but the moment I had examined it I could not help exclaiming, "Had this been on the

other side of the river, and nearer the great mass of ruins, no one could doubt of its being the remains of the tower." As this therefore is the principal objection that can be brought against it, it will be proper to consider it first.

I believe it is no where positively asserted that the Tower of Belus stood in the eastern quarter of Babylon. Herodotus, Strabo, Pliny, and Quintus Curtius, do not affirm this, but it is certainly the generally received opinion; and Major Rennel says, "It may be pretty clearly collected from Diodorus, that the temple stood on the east side and the palace on the west. A presumptive proof of the supposed position of the temple, should the words of Diodorus be regarded as ambiguous, is, that the gate of the city named Belidian, and which we must conclude to be denominated from the temple, appears pretty clearly to have been situated on the east side. When Darius Hystaspes besieged Babylon, the Belidian and Cissian gates were opened to him by Zopyrus; and the Babylonians fled to the Temple of Belus, as we may suppose, the nearest place of refuge. The Cissian or Susian gate must surely have been in the eastern part of the city, as Susa lay to the east; and by circumstances the Belidian gate was near it." Geogr. of Herod. page 355—357. Now, I do not think these premises altogether warrant the

conclusion; in these countries, as has before been remarked*, gates take the names of the places to and not from which they lead; the gates of Babylon are instances of this, and the very gate next the Belidian was called Susian, from the town to which the road it opened upon led; so that, if the Belidian gate really derived its appellation from the temple, it would have been a singular instance, not merely in Babylon, but in the whole East at any period. It is consequently much easier to suppose there may have been a town, village, or other remarkable place without the city, the tradition of which is now lost, which gave its name to the gate, than that such an irregularity existed. As to the inhabitants in their distress taking refuge within the precincts of the temple, it is probable they were induced to it, not from its proximity to the point of attack, but as the grand sanctuary, and from its holiness and great celebrity the one most likely to be respected by the enemy.

The difficulty is however by no means vanquished, by allowing the Temple and Tower of Belus to have stood on the east side; a very strong objection may be brought against the Birs Nemroud, in the distance of its position from the extensive remains on

* Vide also Rennel.

the eastern bank of the Euphrates; which, for its accommodation within the area of Babylon, would oblige us to extend the measurement of each side of the square to nine miles, or adopt a plan which would totally exclude the Mujelibè, all the ruins above it, and most of those below! even in the former case the Mujelibè and the Birs would be at opposite extremities of the town, close to the wall, while we have every reason to believe that the Tower of Belus occupied a central situation. Whether the Birs stood within or without the walls, if it was a building distinct from the Tower of Belus, it appears very surprising how so stupendous a pile, as it must have been in its perfect state, never attracted the attention of those who have enumerated the wonders of Babylon.

The plan of the Birs varies more from a perfect square than that of the Mujelibè, which may be accounted for, on the supposition of its having been in a state of ruin for a much longer period. I think from its general appearance there are some reasons to conclude it was built in several stages, gradually diminishing to the summit. The annexed sketch, in four different views, will convey a clearer idea of it than any description would, and enable in some measure the reader to judge for himself.

In forming a conjecture on the origi al destina-

tion of the Birs, the mound situated parallel to its eastern face, which must have been a building of great dimensions, must not be overlooked. The temple attached to the Tower of Belus must have been a very spacious edifice, and formed part of its quadrangular inclosure, of which it is probable it did not occupy more than one side, the three remaining ones being composed of accommodations for the priests and attendants, of course inferior in proportions to the temple: allowing some degree of resemblance in other respects, between the Birs and the Tower, the elevation observable round the former will represent the priests' apartments, and the above-mentioned mound the temple itself. We find the same kind of mound, and precisely in the same situation, attached to other ruins which have a strong resemblance in themselves to the Birs; and we may therefore reasonably conclude that they were intended for the same design, either the honour of the dead, the observation of the celestial bodies, religious worship, or perhaps some of these motives combined. In like manner we find in Egypt the original idea of the Pyramids exactly copied at different times on a smaller scale, and each pyramid having its dependant temple. I leave to the learned the decision of this point, and the determining what degree of resemblance, in form and purpose, exists

between the Pyramids of Memphis and the Tower of Belus.

I have dwelt the longer on this most interesting of the Babylonian edifices, as I shall have but little to offer on the rest. The citadel or palace (for it served both these purposes, and was the only fortress within the walls,) was surrounded by an exterior wall of sixty stadia in circumference; inside which was another of forty stadia, the interior face of which was ornamented with painting, as is the custom of the Persians at the present day; and again, within this last was a third, adorned with designs of hunting. On the opposite side of the river, and on the same side with the Tower of Belus, was situated the old palace, the outer wall of which was no larger than the inner one of the new. Above the new palace or citadel were the hanging gardens, which, according to Strabo, formed a square of four plethora each face, and were fifty cubits in height. When I consider the dimensions of the Sefivieh palace at Isfahaun, and other similar buildings yet remaining in the East, I see no difficulty in admitting the account of the Babylonian palace in its full extent. The antiquarian will consider how far the measurement of the ruins inclosed between the river and the boundary on the east corresponds with those of the palace: in some respects the Mujelibè would

answer sufficiently well with the accounts of the hanging gardens, were it not for the skeletons found there, which must embarrass almost any theory that may be formed on this extraordinary pile.

There was a tunnel under the Euphrates, of which no trace can reasonably be expected at this time. Semiramis, according to Diodorus, erected a stone obelisk of a hundred and twenty-five feet high by five feet square, which was cut on purpose in the Armenian mountains. As we do not trace this monument in any of the neighbouring towns after the destruction of Babylon, it is not impossible that some vestige of it may yet be discovered.

I have already expressed my belief that the number of buildings in Babylon bore no proportion to the space inclosed by the wall: besides this, it is most probable that the houses were in general small; and even the assertion of Herodotus, that it abounded in houses of two and three stories, argues that the majority consisted of only one. The peculiar climate of this district must have caused a similarity of habits and accommodation in all ages; and if upon this principle we take the present fashion of building as some example of the mode heretofore practised in Babylon, the houses that had more than one story must have consisted of the ground floor or *basse-cour*, occupied by stables, magazines,

and sefdaubs or cellars, sunk a little below the ground, for the comfort of the inhabitants during the heats; above this a gallery with the lodgings rooms opening into it, and over all the flat terraces for the people to sleep on during the summer.

From what remains of Babylon, and even from the most favourable account handed down to us, there is every reason to believe that the public edifices which adorned it, were remarkable more for vastness of dimensions than elegance of design, and solidity of fabric rather than beauty of execution. The Tower of Belus appears merely to have been astonishing from its size. It was inferior in some respects to the Pyramids, and did not surpass either them or probably the great temple of Mexico in external appearance; and the ornaments of which Xerxes despoiled it, convey an idea of barbaric richness, rather than taste: all the sculptures which are found among the ruins, though some of them are executed with the greatest apparent care, speak a barbarous people. Indeed with a much greater degree of refinement than the Babylonians seem to have been in possession of, it would be difficult to make any thing of such unpropitious materials as brick and bitumen. Notwithstanding the assertion of M. Dutens, there are the strongest grounds for supposing that the Babylonians were entirely unac-

quainted with the arch, of which I could not find the slightest trace in any part of the ruins where I purposely made the strictest search; particularly in the subterranean at the Kasr, and the passages in Mujelibè. The place of the column too appears to have been supplied by thick piers, buttresses, and pilasters; for to the posts of date-wood, which was then and is still made great use of in the architecture of this country, the name of *pillar* certainly cannot with propriety be applied. Strabo says, "On account of the scarcity of proper timber, the wood-work of the houses is made of the date-tree; round the posts they twist reeds, on which they apply a coat of paint*." What Xenophon and Strabo say of the doors being smeared over with bitumen, I understand to be meant of the naphtha oil, with which they at present varnish all their painted work; the reasons for covering a door with bitumen not

* It is curious to compare the account Strabo gives, lib. xvi. pag. 511, of the uses to which the Babylonians applied the date in his time, with the practice of the present day. He says, The date furnished them with bread, honey, wine, and vinegar; the stones supplied the blacksmiths with charcoal; or, being macerated, afforded food for cattle. The peasantry now principally subsist on dates pressed into cakes; they prepare molasses (dibs), make vinegar, and distil a spirituous liquor called Arrak from them, but of the two latter uses mentioned by Strabo they are ignorant. Oil of sesame is still the only sort used, either for eating or burning, as in the time of Strabo.

being so obvious. When any considerable degree of thickness was required, the way of building was to form an interior of common brick or rubbish, cased with a revêtement of fine brick; there are traces in the ruins which justify this opinion; and in this manner the Tower of Belus (which Herodotus calls πυργον στερεος), the city walls, and other buildings of that description, seem to have been constructed.

We find two kinds of brick in Babylon; one burnt in a kiln, the other simply dried in the sun. I cannot refrain in this place from offering a few remarks on Gen. xi, 3, where concerning the building of Babel it is said: וַיֹּאמְרוּ אִישׁ אֶל־רֵעֵהוּ הָבָה נִלְבְּנָה לְבֵנִים וְנִשְׂרְפָה לִשְׂרֵפָה וַתְּהִי לָהֶם הַלְּבֵנָה לְאָבֶן וְהַחֵמָר הָיָה לָהֶם לַחֹמֶר Our translation is: "And they said one to another, Go to, let us make brick and burn them thoroughly: and they had brick for stone, and slime had they for mortar." This is incorrect. The Chaldee paraphrast has יוֹקְרְתָּא וַהֲוַת לְהוֹן לְבֵינָתָא לְאַבְנָא וְתִימְרָא רְוָה לְהוֹן לְשִׁיעַ According to Buxtorff, and indeed the sense it still bears in these parts, חֹמֶר means cement, and חֵמָר bitumen; so that the Vulgate is correct in saying: "Dixitque alter ad proximum suum, Venite, faciamus lateres et coquamus eos igni: habueruntque la-

teres pro saxis, et bitumen pro cemento." I have not a Polyglot to consult, and therefore am not able to trace the error in our version higher than to Luther's German one. It is true Castell translates חֵמָר *limus, lutum,* in Gen. xi. 3, and *bitumen* in Exod. ii. 3. This is extraordinary; for, of the two, the context of the latter passage would appear rather to justify the former reading, to avoid the seeming tautology between חֵמָר and זֶפֶת I conclude he must have taken the common translation of the Bible as sufficient authority, without further examination; for he allows the Chaldee word חִימְרָא (Targ. Gen. xi. 3.) to signify bitumen, in direct opposition to his definition of the corresponding Hebrew word. לְבֵנָה signifies *brick*, of course the burnt sort from its root; and both Golius and Castell, perhaps relying too much on the Hebrew derivation, translate the Arabic word لبن *burnt brick* also. Nevertheless it is now exclusively applied by the Arabs to the brick merely dried in the sun.

The general size of the kiln-burnt brick is thirteen inches square, by three thick: there are some of half these dimensions, and a few of different shapes for particular purposes, such as rounding corners, &c. They are of several different colours; white, approaching more or less to a yellowish cast, like our Stourbridge or fire brick, which is the finest

sort; red, like our ordinary brick, which is the coarsest sort; and some which have a blackish cast and are very hard. The sun-dried brick is considerably larger than that baked in the kiln, and in general looks like a thick clumsy clod of earth, in which are seen small broken reeds, or chopped straw, used for the obvious purpose of binding them: in like manner the flat roofs of the houses at Bagdad are covered with a composition of earth and mortar mixed up with chopped straw. At the Birs Nemroud I found some fire-burnt bricks, which appeared to have had the same materials in their composition. The best sun-dried bricks I ever saw, are those which compose the ruin called Akerkouf.

There are three kinds of cement discoverable in the ruins of Babylon: bitumen, mortar, and clay. I am inclined to think the former could never have been of such very general use as is commonly imagined; we now only find it in a few situations (not always such as indicate the reason for which it was used), except the small pieces of it which are found on the surface of the mounds. Though the fountains at Heet are inexhaustible, the Babylonians had nearer at hand a much better cement, the discovery of which was a very obvious one; and the richness of the ruins in nitre, is some proof that lime cement was the one most generally employed. The pre-

paration necessary for the bitumen is a much more expensive and troublesome one than that requisite for lime, for the commoner sort of which a simple burning with the brambles, which abound in the Desert, is sufficient; while the bitumen, to deprive it of its brittleness and render it capable of being applied to the brick, must be boiled with a certain proportion of oil; and after all, the tenacity of the bitumen bears no comparison with that of the mortar. The bricks which Niebuhr mentions as being so easily separated, were all laid in bitumen; and I invariably found that when this was the case, as above the subterranean passage in the mound of the Kasr, the bricks could be picked out with a small pickaxe, or even trowel, with the utmost facility; but where the best mortar had been used, as at the Birs, no force or art could detach the bricks without breaking them in pieces.

There are two places in the pashalick of Bagdad where bitumen is found: the first is near Kerkouk, and too remote to come under present consideration; the next is at Heet, the Is of Herodotus, whence the Babylonians drew their supplies. Heet is a town situated on the Euphrates, about thirty leagues to the west of Bagdad, inhabited by Arabs and Karaite Jews. The principal bitumen-pit has two sources, and is divided by a wall in the centre,

on one side of which the bitumen bubbles up, and on the other oil of naphtha; for these two productions are always found in the same situation. That kind of petroleum, called by the Orientals Mumia, is also found here, but of a quality greatly inferior to that brought from Persia. Strabo, who calls the naphtha *liquid bitumen*, says its flame cannot be extinguished by water, and relates a cruel experiment made by Alexander, to prove the truth of this, the result of which however is in direct contradiction of it. I believe it is Diodorus alone wo asserts that bitumen flows out of the ground at Babylon. Herodotus positively says it was brought from Heet, and Strabo generally that it is produced in Babylonia. I was unable to discover any traces of it in the vicinity of Hilla, except on the testimony of a Jew, who told me he believed it might be found in the Desert. It is at present used for caulking boats, coating cisterns, baths, and other places that are to remain in contact with water. The fragments of it scattered over the ruins of Babylon are black, shining, and brittle, somewhat resembling pit-coal in substance and appearance; the Turks call it *Zift*, and the Arabs *Kier* or *Geer* (قير).

There are three kinds of calcareous earth found in most situations in the western desert between Babylon, Heet, and Ana. The first is called *Noora*,

and is a white powder particularly abundant at Heet and Ana. Mixed with ashes it is used as a coating for the lower parts of walls, in baths and other places liable to damps. The second is also found in powder, mixed with indurated pieces of the same substance, and round pebbles; it is called by the Turks *Kâreĵ*, and by the Arabs *Jus*; it is very plentiful between Hilla and Felugiah, is the common cement of the country, and composes the mortar which is found in the ruins of Babylon. The third species, called *Borak*, is a substance resembling gypsum, and is found in large craggy lumps of an earthy appearance externally, but being burnt it forms an excellent white-wash or plaster. I have seen some mortar in Babylon of a reddish appearance, as if clay had been mixed with it; and there yet remains another kind of cement to be spoken of, viz. pure clay or mud; the use of which is exclusively confined to the sun-dried brick; and it is indeed a very imperfect cement, notwithstanding the great thickness in which it is laid on. At the Mujelibè, layers of reeds are found on the top of every layer of mud-cement, between it and the layer of brick: the use of the reeds (which are the common growth of the marshes) is not very obvious, unless it be supposed that they were intended to prevent the bricks sinking unequally and too speedily into the thick layer of mud:

they are in a surprisingly perfect state, and handfulls of them are easily drawn out. I never saw any reeds employed where any other kind of cement was used. Herodotus asserts that the tops of them are intermixed with the bitumen, and I have certainly observed on pieces of bitumen impressions like short pieces of reed, though not a fragment of the reeds themselves (if there ever were any) remain; and from subsequent observations I am inclined to think such appearances might proceed from other causes. In the mud cement of the walls of Ctesiphon there are layers of reeds, as at Babylon, and I believe they are also to be found among the ruins of Seleucia, the builders of which would naturally have copied the peculiarities of the Babylonian architecture, and have been imitated in their turn by their Parthian neighbours.

I have thus given a faithful account of my observations at Babylon, and offer it merely as a prelude to further researches, which repeated visits to the same spot may enable me to make. My wish to be minutely accurate, has, I fear, often betrayed me into tediousness; but the subject is a curious, perhaps an important one, as it may tend to illustrate several passages in the sacred and profane writers. Instead of being disappointed at the difficulty of ascertaining any part of the original plan of Baby-

lon, from its present remains, we ought rather to be astonished at the grandeur of that city which has left such traces, when we consider that it was nearly a heap of ruins two thousand years ago; that immense cities have been built out of its materials, which still appear to be inexhaustible; and that the capital of the Arsacides, which we know to have been one of the most extensive and magnificent cities of comparatively modern times, has left but a few confused vestiges, which are scarcely elevated above the level of the Desert, and which in a few years the most inquiring eye will be unable to discover.

THE END.

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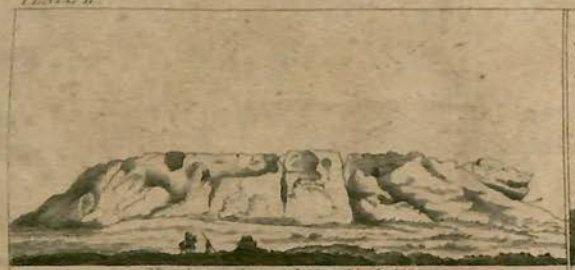
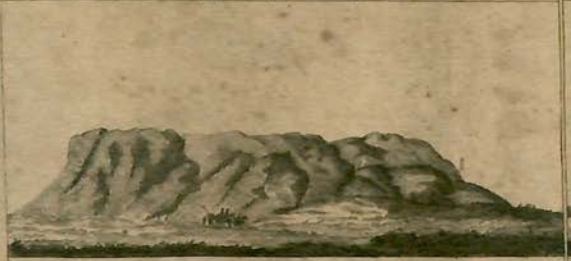
PLATE II.



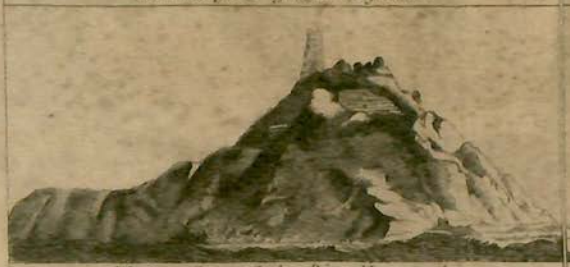
Northern face of the Mujelibè.

Southern face of the Mujelibè.

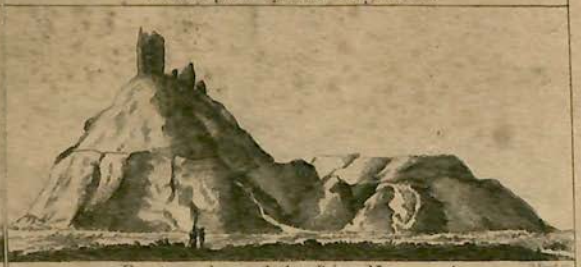


Eastern face of the Mujelibè.

Western face of the Mujelibè.

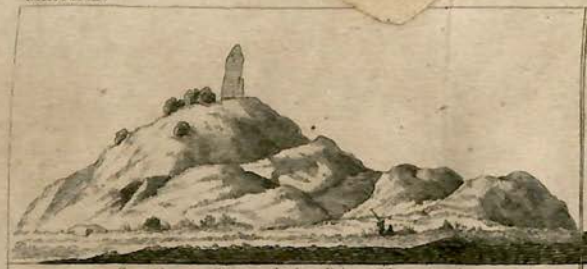


Western face of the Birs Nemroud.



Eastern face of the Birs Nemroud.

PLATE III.



Southern face of the Birs Nemroud.

Northern face of the Birs Nemroud.

East face of the Kasr.

West face of the Kasr.

North face of the Kasr.

View of the Embankment (B & K in the Plan) together with part of the Eastern Ruins from the opposite bank of the River.

D. Read &c.

A. The mounds of Amran.
B. The Tomb of Amran ibn Ali.
C. The Embankment. Urns containing human bones were found at the foot of this part of it, close to the water.
D. The Ground gained from the River by its having altered its course.
(Marked also D in the Plan.)

ROYAL ASIATIC SOCIETY

SECOND MEMOIR ON BABYLON:

CONTAINING

AN INQUIRY

INTO

THE CORRESPONDENCE BETWEEN THE ANCIENT DESCRIPTIONS OF BABYLON AND THE REMAINS STILL VISIBLE ON THE SITE.

SUGGESTED BY THE "REMARKS" OF MAJOR RENNEL PUBLISHED IN THE *ARCHÆOLOGIA*.

BY

CLAUDIUS JAMES RICH, Esq.

LONDON:

PRINTED FOR LONGMAN, HURST, REES, ORME, AND BROWN, PATERNOSTER ROW; AND J. MURRAY, ALBEMARLE STREET.

1818.

PRINTED BY RICHARD AND ARTHUR TAYLOR, SHOE LANE.

ADVERTISEMENT.

My first very imperfect Memoir made its appearance in an oriental literary Journal, published in Vienna, and called the *Mines de l'Orient*. So numerous were the typographical errors of that edition, that my Essay was in many places scarcely recognisable even by myself. My friends were of opinion that it ought to be republished in England; and an edition of it was printed from the *Mines de l'Orient*, which was received with indulgence by the Public, notwithstanding the many inaccuracies which I fear must have been retained. I have not seen a copy of the English edition, and therefore in the following Memoir I beg to be understood as referring entirely to the original German one.

MEMOIR

ON

THE RUINS OF BABYLON.

ON my first visit to Babylon I was struck by the want of accuracy in the accounts of all travellers who had visited that celebrated spot. The ruins appeared to me to merit a very minute description and delineation; but such a work it was evident would occupy much more time, and require more extensive information, than I was then in possession of; and I deferred the accomplishment of it to a more favourable conjuncture. In the meantime I was anxious to give some notion of the real state of the ruins: I therefore drew up a short account, accompanied by an illustrative sketch, which I ventured to offer to the public, principally with a view to excite the attention of the learned, and induce

them to transmit to me such remarks as might enable me to accomplish my design in a more perfect manner than I could hope to do by my own unassisted efforts. It was no part of my object at that stage of the inquiry to bring forward my own speculations, had I then been qualified to do so; and I purposely abstained from any remarks which did not tend to throw light on my account of the ruins, and stimulate the attention without misleading the judgement of those who applied themselves to the subject. But having hitherto sufficiently separated observation from opinion, I now venture to lay before the public the result of better information and more matured opinions. I have been more particularly induced to enter into a discussion on the correspondence between the accounts of the ancient historians and the ruins I visited, by a paper written by Major Rennel*, professedly "to vindicate the truth and consistency of ancient history, as well as his own account of Babylon in the Geography of Herodotus," as he "conceives my former statements to be at variance with commonly received

* Remarks on the Topography of Ancient Babylon, suggested by the recent Observations and Discoveries of Claudius James Rich, Esq., communicated to the Society of Antiquaries by Major Rennel;—from the Archæologia, London, 1816, pp. 22.

opinions." Diffident as I am in opposing my ideas to such an authority, I feel myself called upon to state that I cannot coincide with Major Rennel, either in his interpretation of the ancient writers or in his deductions from the actual appearance of the ruins. I shall therefore make his Remarks the basis of the present dissertation, as they appear to me to contain all that can be said in favour of the old theory, with many additional particulars; and also because this method will afford me an opportunity of supplying some of the deficiencies of my former Memoir, and possibly of throwing some new light on the subject.

The sum of Major Rennel's argument is as follows: The Euphrates divided Babylon into two equal parts; one palace, with the Tower of Belus, stood on the east of it, and the other immediately opposite it, on the west—each occupying central situations in their respective divisions; or rather, the palaces and temple together formed the central point of the city, and were separated from each other by the river.—Now, in my account of the ruins it is said that there are no remains on the western bank; therefore the river must formerly have run through the ruins described by me on the eastern side, so as to have divided them into two equal portions. But there are certain mounds laid

down in my plan, which render it evident that the river could not have run in that direction. These mounds must consequently be referred to a town of more recent construction, of whose existence Major Rennel himself acknowledges we have no other evidence.

I shall now state in general terms what I have to object to this theory. None of the ancients say on which side of the river the Tower of Belus stood. The circumstance of there having been two palaces in Babylon is extremely questionable. There are no traces whatever on the spot, of any such change in the river as Major Rennel imagines. The supposition of the existence of a more recent town, merely for the purpose of getting rid of the difficulty, cannot be allowed in the absence of all historical and traditional evidence, when the appearance of the ruins themselves is decidedly against it. And finally, the descriptions of the ancient historians may be reconciled with the present remains, without having recourse to any such conjectures.—When a person ventures to disagree with such a writer as Major Rennel, it behoves him to state his reasons very particularly. I shall therefore proceed to develop the opinions which I have just stated.

Before we enter on any topographical inquiry in which we have to reconcile observation with his-

tory,—if we consider how different are the talents required for narrative and description, how numerous are the sources of error, and how devoid the ancients were of that minute accuracy and patient research which are required in this critical age,—so far from taking their accounts of places and positions in the strictest and most literal sense of which they are susceptible, we might allow them a very considerable latitude, without calling their general veracity in question. Instead of making this allowance, however, writers have too frequently seemed to expect a precision from the old historians in their accounts of very remote places, which could only be reasonably looked for in the treatises of professed topographers; and to have tried the very scanty accounts we have of many ancient places, by a stricter standard than many modern descriptions would bear. We naturally wish to make the most of what we possess in the smallest quantity, and to seize with avidity on a single word which may help us through the obscurity of antiquity, or enable us to establish a favourite hypothesis. The testimony of the ancients who have been on the spot must of course be placed far above those who merely copy others; whose statements, however high their rank in literature may be, must be received with much caution; and when their descriptions in either case

do not accord with what we now see, it is much safer to say that they were mistaken, than to attempt forcing a resemblance. It would require a separate memoir to prosecute this subject to the extent which would be necessary to show the various causes of error, give examples of the mistakes and inaccuracies even of professed travellers, and prove how often we have rendered the ancients accountable for much more than they ever dreamt of themselves. I the more readily refrain from such an inquiry at present, as it is not necessary to my subject to carry it so far. I have thought it requisite to state my general opinion of the ancients as topographical authorities; but in reconciling the present remains of Babylon to their accounts, I shall not have occasion to contend for the latitude which may commonly be allowed to them. I shall on the contrary show that I am willing to adhere much closer to the only one of them whose authority is of any value in this case, than Major Rennel seems to be aware of.

Those who have investigated the antiquities of Babylon have laid much stress on the authority of Diodorus, probably adverting more to the quantity than the quality of the information he supplies. He never was on the spot: he lived in an age when, as he himself tells us, its area was ploughed over:

he has therefore recourse to Ctesias; and it must be owned that the want of discrimination in the ancients, and the credulity of Diodorus himself, were never more strongly exemplified than in his choice of a writer who confounds the Euphrates with the Tigris, and tells us that Semiramis erected a monument to her husband, which from the dimensions he specifies must have been of superior elevation to Mount Vesuvius, and nearly equal to Mount Hecla. (A.) If these are not "fairy tales," I certainly know not to what the term can be applied. When an author can in so many instances be clearly convicted of ignorance and exaggeration, we are certainly not justified in altering what is already before our eyes, to suit it to his description. We have only the very questionable authority of Ctesias for the second palace, and the wonderful tunnel under the river; but even he does not say whether the Tower of Belus stood on the east or west side. Herodotus, who will ever appear to greater advantage the more he is examined and understood, is the only historian who visited Babylon in person; and he is in every respect the best authority for its state in his time. The circumference he assigns to it has been generally deemed exaggerated; but after all we cannot prove it to be so. He says nothing to determine the situation of the Palace (for he speaks

but of one) and Temple; he has no mention of east or west, or of proximity to the river. It is true, it has been attempted to establish from him, that the Temple was exactly in the centre of one of the halves into which the city was divided by the river; which, by the way, if clearly made out, would not agree with Major Rennel's position of it on the river's banks: but the error appears to have arisen from translating *μέσος*, *centre*. Herodotus's words are, ἐν δὲ φάρσει ἑκατέρῳ τῆς πόλιος ἐτετείχιστο ἐν μέσῳ· ἐν τῷ μὲν τῇ τὰ βασιληΐα, περιβόλῳ τε μεγάλῳ καὶ ἰσχυρῷ· ἐν δὲ τῷ ἑτέρῳ, Διὸς Βήλου ἱρὸν χαλκόπυλον, κ.τ.λ. (Herod. Wessel. p. 85.), in which I do not see the necessity of adopting so mathematical a signification. (B.) Strabo, as might be expected, contains much fewer particulars than Herodotus; and the other Grecian and Roman historians still less; they are consequently of little use in a topographical inquiry. It appears, therefore, that none of the ancients say whether the Tower of Belus was on the east or the west of the Euphrates; that its position in the centre of the city, or even of one of its divisions, is by no means clearly made out; and that, while the description of the best ancient author involves no difficulties, the only particulars which embarrass us are supported by the sole testimony of the worst.

It appears to me that Major Rennel's error (if I may be allowed to use such an expression) proceeds from his having fixed upon the Mujelibè to represent the Tower of Belus (an opinion which the more I consider the appearance of that ruin the less I am inclined to agree with), and reducing every other part of Babylon to that centre. Having settled this point, adopting the system of Diodorus, he refers the remaining ruins to the old and new Palaces; but in order to justify this arrangement, he is obliged to resort to the supposition of a change in the course of the river. "The several particulars of the remains on the site required only the presence of the river in a particular line of course to complete the general description given by the ancients*." The supposed change would therefore certainly cut the Gordian knot, if we believe the ruins on the east to be the only remains of Babylon; but there are no traces whatever on the ground in support of such an assumption. I carefully examined the whole of the ground between Hillà and the Mujelibè, with a view to ascertain the possibility of a change; but I was totally unable to discover the smallest vestiges indicative of it. The same examination was made by others, during my stay

* "Remarks," p. 6.

there, and since that time, with the same result. I have long been accustomed to observe the changes in the courses of rivers, from having lived ten years on the banks of one subject to them in a most remarkable degree. The Euphrates is by no means so variable: the lowness of its banks affording a facility for its discharging the superabundance of its waters by the means of canals and inundations, renders it not liable to a complete alteration of its course. The strong embankment built by the Babylonian monarchs was intended to prevent the overflow, not to secure its running in one channel; and ever since the embankment was ruined, the river has expended itself in periodical inundations. This is the case in many parts of its progress; for instance, at Feluja, the inundation from whence covers the whole face of the country as far as the walls of Bagdad; and the river itself has, to the best of my information, constantly flowed at that place in the same channel, without any variation. At Hilla, notwithstanding the numerous canals drawn from it, when it rises it overflows many parts of the western desert; and on the east it insinuates itself into all the hollows and more level parts of the ruins, converting them into lakes and morasses. This will sufficiently account for many appearances in those ruins, which might sur-

prise those who had not adverted to the circumstance. The Khezail district at such times is in many parts completely inundated; and still further down, since a dyke which used to be kept up at a considerable expense has been broken, the river flows over the country as far as Bussora. But in no part of the Euphrates have I ever been able to discover traces of its having altered its course. On the other hand, the Tigris, which is much more rapid than the Euphrates, has none of these regulating valves to draw off its superfluous water, which consequently breaks down its own banks. This is the case during its course through the upper and middle parts of the Pashalik, where it is confined between high banks, and cannot be expended in inundations, or drawn off by canals; but in the southern districts, where it runs through the lowest part of the Beni Lam country, the banks are level, there are many drains, and it overflows readily. In those places it is not subject to the variations of channel which characterize it during the earlier part of its course.

Having shown that the first part of Major Rennel's theory is contradicted by a survey of the ground, I have to state the reasons which induce me equally to disagree with him in his second conjecture. This part of the subject requires to be treated at some length.

As some of the ruins now seen would obstruct the course of the Euphrates, supposed by Major Rennel, he removes this difficulty by referring them to another town. "The whole of the remains visible in the form of mounds, &c. do not belong exclusively to the ancient city, but in part to a subsequent establishment, not recorded in history, and perhaps of a date previous to the Mahometan conquest." (p. 5.) To this assumption I object,

1. The mounds or ruins rejected by Major Rennel differ in no respect from those he admits; they appear to form a part of the plan which they help to explain; they are connected with, or dependent on, the primitive mounds; and no sort of evidence can be drawn from their appearance or composition to call in question their being of equal antiquity.

2. It is granted by all, that the mounds of the Kasr and Amran, with some others among them, are a part of ancient Babylon. It appears very improbable that any one should attempt to build on such masses of decayed edifices, even in their present state, when they have doubtless diminished, and subsided into much greater solidity than at the period Major R. assigns to his city. If ever a town existed in this neighbourhood, it certainly would not have been among or upon these heaps of rub-

bish. The only mound which could have undergone a revolution of this nature is the Mujelibè, which, whatever it may have been, certainly now bears a striking resemblance to fortified artificial mounts, like the castles of Kerkook, Arbil, and many other places in these countries;—it might even now be restored to its castellated state. I am clearly of opinion, as I think every one must be who has visited the spot, that either the whole of the eastern ruins are Babylon, or they must be referred entirely to another establishment, and Babylon left out of the question. The Mujelibè, as before observed, might possibly be excepted from this decision, were it necessary, as it appears to be, like the ruin at Nineveh*, rather an artificial mount than a mass of decayed building.

3. One reason assigned by Major Rennel for supposing a more recent town is, "that it is difficult to reconcile the circular and other mounds of earth with the description of the regular distribution of streets in ancient Babylon" (p. 5.); though, in the Geography of Herodotus, he is willing to allow that there existed in each quarter of Babylon a circular space surrounded by a wall†. I admit for a moment this regular distribution of streets. But Major

* See Note A. † Geography of Herod. p. 337.

Rennel receives the eastern ruins as the Temple and Palaces. Now it is clear that the regular distribution of streets could never have been observed in or near these buildings; and so far from excluding the boundary wall on account of its not falling in with it, had any symptoms of such an arrangement been observed here, it would have been reason sufficient to pronounce at once that the eastern ruins could neither represent the Palaces nor the Tower.—After all, I find a difficulty in believing that the whole area of Babylon was divided into regular compartments by the intersection of lines of houses at right angles, like the surface of a chess-board. This savours strongly of an imaginary arrangement. It might have been nearly true of some divisions or quarters, yet I would nowhere vouch for its mathematical accuracy. The area of Babylon, we have every reason to believe, was at all times very far from being thickly built on; a very considerable proportion of it was occupied by cultivation; and the care with which the river was fortified with an embattled wall and brazen gates, guarding each bank through the whole extent of the town, seems indicative of the scantiness of the houses, even on the river; which seems further illustrated by the ease with which Cyrus turned the river, unknown to the in-

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habitants, entered by its dry channel, and lodged his army safely in the town, within the fortifications by which it was guarded on the water side, before the Babylonians suspected what he was about.

Major Rennel in another part of the "Remarks" (p. 17-18) says, he cannot persuade himself that the parts of a *building* named the Kasr is a Babylonian structure. He believes it to be "one of a much later date, possibly coeval with the circular and other mounds of earth before mentioned;" i. e. subsequent to old Babylon, but before the time of Islam. His principal objection is, that it looks too fresh, "which," he observes, "is not the character of ruins more than 2000 years old." Neither is it the character of buildings of the age which he assigns to his supposed town, i. e. prior to the introduction of Islam; and if it be allowed to have preserved its freshness so long, there can certainly be no difficulty in granting it the additional number of years. In this pure and dry climate, other evidence than its being fresh and unworn is required to dispute the antiquity of a ruin which has till very lately remained entirely covered up. Whatever may be its appearance, the difficulties which oppose its rejection from the ruins of Babylon are very great, independent of the improbabi-

lity of such a building having been erected on a heap of rubbish. But it does not stand *on* the mound which I have named after it, and which is allowed to be Babylonian; it is inclosed within the mass, and has been covered by it. The rubbish has only been cleared off its top part; and its side walls, though not perfectly laid open, yet are seen to reach down very far below the general surface of the mound, as my drawing shows. This building is indisputably connected with walls and fragments similar to it, to be seen in various parts of the same mound, quite in its heart, and at a great depth, and which have been discovered in piercing and hollowing out the heaps to find bricks:—some of these walls are, I believe, on a level with the plain itself. I cannot therefore doubt that the walls are coeval with the mound itself by which they have been covered; or at least erected before the buildings whose ruins formed the mound had crumbled into rubbish (for it is not pretended to refer every ruin which remains of ancient Babylon to the age of Nebuchadnezzar); and if *they* are condemned, the mound itself, consequently, and all the mounds or heaps attached to it, cannot be admitted to be a part of ancient Babylon.—I shall in the sequel have occasion to return to this subject.

As Major Rennel appears generally inclined to

receive so literally the statements of the ancients, even of Diodorus, it is a little surprising that he has not adverted to the dimensions assigned by that writer to the Palaces: he would have seen, that so far from warranting the belief of the eastern ruins comprising the remains of all the public edifices of Babylon (*viz.* the new Palace of 60 stades in circumference, the old one of 30 stades, and the Temple of Belus of 8 stades), it is evident that they will only answer to the new Palace, with its Acropolis. It is true, Diodorus places his largest palace on the west; but an author who confounds the Tigris with the Euphrates may without injustice be suspected of a topographical inaccuracy of this nature. (C.) Indeed, whether we do or do not admit the authority of Diodorus, the best conclusion to be drawn from the appearance and plan of these ruins is, that they represent the whole of the royal precincts, including the hanging gardens*. The ruins of the Palace of Babylon might well resemble in every respect those we see on the eastern bank of the Eu-

* We should form a very incorrect notion of the residence of an eastern monarch, if we imagined it was one building which in its decay would leave a single mound, or mass of ruins. Such establishments always consist of a fortified inclosure, the area of which is occupied by many buildings of various kinds, without symmetry or general design, and with large vacant spaces between them.

phrates: the mound called by Major Rennel "the rampart of new Babylon" will answer perfectly to the outer wall of the Palace, for which its extent is by no means too great; and thus all difficulties immediately vanish, without the necessity of turning the river or building a new town. This could hardly have failed striking Major Rennel also, had he not set out by assuming the Mujelibè to be the Tower of Belus; which, if the supposition of the Palace having been situated here be just, must certainly be looked for in a different direction—each being said to be seated within its own division of the city. In fact, there is not the slightest reason to believe that the Tower was situated on or near the river, though we may safely infer that such a stream must have been taken advantage of in placing the Palace. Had the Palace and Tower been so very near each other, it would probably have been remarked by Herodotus, whose authority Major Rennel is willing to abandon in this particular. From what I have before said, it may be seen that I cannot receive the Mujelibè as the Tower of Belus, even independent of its position.

Having said so much of the general state of the eastern ruins, I have but a few words to add concerning the particular parts of them, about which Major Rennel seems to think I have not been suf-

ficiently explicit in my former Memoir. I was fearful of becoming tedious by expatiating on misshapen heaps of rubbish, which are much better understood by a drawing; except—like the mound of the Kassr—they happen to contain within their general mass some peculiarity worthy of remark. It is on this account, and not because I had not examined them, that I passed the little heaps which lie between the Kassr and the Mujelibè without particular mention, after having satisfied myself that they contained nothing which required one. They are in fact nothing more than low heaps, or traces of building extending in that direction, of no elevation or determined form, precisely as I have laid them down in my plan. Major Rennel seems, however, to consider them as requisite to the formation of his theory. He calls them the "north-east mounds," in the sketch of the site of ancient Babylon (drawn chiefly from the information contained in my Memoir) which he has prefixed to his "Remarks;" has assigned them a place, form, and magnitude to which they are by no means entitled*, and conjectures them to be the ruins of the least and oldest of the palaces mentioned by Diodorus.

I observe some other alterations from my plan,

* Vide the Sketch prefixed to his "Remarks," &c. (D.)

which are not wholly immaterial: especially an opening between the south-west angle of the mound called the Kassr, and the arm which ought to connect it with the north-west angle of that of Amran. I suppose I have to attribute these to the person who engraved the plan for the English edition of my Memoir, as Major Rennel would doubtless have noticed the alterations, had they come from himself. But there is another error, which I have to attribute to my own want of precision. The mounds placed to the right and left of the Mohawil road by Major Rennel should be by no means so frequent, or of such magnitude: he was probably deceived by the looseness of my expression, that "the whole country between Mohawil and Hillah exhibits at *intervals* traces of building." But there should have been none at all south of Jumjuma, or between the ruins laid down in my plan and the town of Hilla.

Of the mound of Amran I was not aware that it was possible to say any thing more, after having described its form and general appearance, as it offers no peculiarity meriting attention. It is composed, like the rest, of earth, or rubbish formed by the decomposition of bricks and other materials. The canal of Mohawil Major Rennel seems inclined to think may have been the ditch of Baby-

lon. I confess this is a probability which did not strike me when I was on the spot; and I saw no reason to doubt its ever having been different from what it is at present,—a canal cut from the Euphrates to water some government lands which are let out for an annual rent. It is crossed by a bridge of one small arch, and differs in no respect from the multitude of other canals which traverse this country.

In the foregoing remarks I have taken for granted, what indeed appears to be now the general belief, that the ruins at Hilla are those of Babylon. I have myself no doubt of the fact: but as Major Rennel has hinted a possibility of there having been another town here, I think it but fair to state all that can be urged in favour of such a supposition. The canals which run along the southern side of the Mujelibè are called New and Old Neel, the latter of which is said to be very ancient. This fact becomes interesting when we find Al Neel mentioned in history as the name of a place or district; but the notices we have of this place are very few and meager. Abulfeda* says Al Neel is *a place* between Bagdad and Coufah. In Assemani I find a Bishop of Al Neel, Nilus, in Babylonia mentioned

* *Takweem ul Boldan.*

in A.D. 1028. He was one of the suffragans in the Patriarch's own province. Amrus, in the Life of St. Elias, says there was but one bishop for Naamania, Al Neel, and Badraya (a village near Koche); from which there is some reason to infer that those places were near each other*. The Turkish geographer mentions Al Neel in his list of the districts of Bagdad; and in the particular description says no more than "Nil is a district containing several villages, with much cultivation and many gardens†:" but he does not say where it is situated. D'Herbelot mentions a christian Arabian poet, surnamed Al Neelè, A.H. 608. D'Anville marks in his map of the Euphrates and Tigris a place named Nil, or Nilus, on the west bank of the Euphrates, below Hilla, at the mouth of the canal of Coufah‡. I am ignorant of the authority on which he has introduced this place into his Memoir and map: but as he places Kassr Ibn Hobeira on the same canal, it is to be inferred that he is mistaken as to its position. Seif ud Doulah is said to have succeeded in A.H. 479 to his father's possessions, the districts of Hilla, Al Neel, &c.§

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* Assemani, vol. iii. p. 766. † *Jehan Numa*, p. 462.

‡ D'Anville, *L'Euphrate et le Tigre*, p. 126.

§ Modern Universal History, vol. iv. p. 372.

I am not able to trace Al Neel further back in history than 1000 of Christ.

These, it must be confessed, will at first sight appear but very scanty materials to form any decisive judgement on so important a point. When we consider them attentively, however, several particulars may be inferred from them of considerable use in the present question. The obscurity in which it is involved is in itself a presumptive proof of its little importance. The name is evidently derived from the canal. This latter circumstance might lead us to infer that there was no town at all of this name, but that it was merely a canal and district containing several villages, as indeed is expressly stated by the Turkish geographer. Such are the modern districts of this country, which take their names from the canal which waters it; but none contain any town which would leave the slightest traces a few years after its destruction. As instances, I may mention Dujjeil and Khalis, neither of which districts contains any place with these names. The expression of Abulfeda is one of those equivocal words which occur too often in the Oriental languages. بلد may mean either a district or town: and a person now commonly says he is going to Khalis, or he has lived at Dujjeil; by which he may mean any of the villages contained

within that district; and its having been a bishopric is in the East no proof of its size—either a whole district or a very insignificant village may have enjoyed this honour; and we see that at one period the bishopric of Al Neel was united with two others. I have myself no doubt that Al Neel was always, as it is now, the name of a district, and that it contained no remarkable place; in which belief I am further justified by the information obligingly communicated to me by H. H. the Pasha, from the register office of Bagdad. But as some people may possibly differ with me, I shall consider it also under a different point of view, and endeavour to anticipate every objection.

I think it will readily be conceded that Al Neel —supposing it to have been a town named after the canal—could not have been a place of any magnitude: or, to speak more precisely, there is not the slightest reason to believe it could have been as large as Hilla. We have no records which give it any high antiquity; nor is there any necessity for placing it at the mouth of the canal. We have indeed examples of the contrary in Nahrouan, Naher Malcha, and many other places. We thus come at some important conclusions. Whatever ruins the town of Neel—if ever such a place existed—may be believed to have left, we have no positive reason

for supposing them to occupy this spot: and a place even much larger and more important than Hilla could not leave remains in any degree resembling, either in magnitude or composition, those we now see on the eastern bank of the Euphrates. Were it necessary, innumerable instances might be adduced from the ruins of well-known places in this neighbourhood in support of this assertion: and to show that the eastern ruins must be wholly the remains of public buildings, the large cities of Ctesiphon and Seleucia will suffice;—neither of them has left vestiges of more than their walls (if we except the Tank Kesra), and indeed those of Seleucia have almost totally disappeared.

I will go further, and state my opinion that, even should it be imagined by any one that there was a town on the north side of the canal and at the base of the Mujelibè (the only spot where it could have been situated), and that it was considerable enough to have had a castle the size of that curious ruin,—this supposition makes no difference whatever in the opinion I have expressed. I will take for an example the modern town of Arbil, which has an artificial mount at least as large as the Mujelibè, and much higher. This mount, which is of the highest antiquity, and probably existed in the days of Alexander, has been crowned by a succession of castles in different ages. The present is

a Turkish building, and contains within its walls (as the others doubtless did) a portion of the town, consisting of two mahallas or parishes: the remainder of the town is situated at the foot of the mount, and would, if abandoned, in a few years leave not a single vestige behind. Precisely the same observation holds good of the still more considerable city and castle of Kerkook. We may therefore, I presume, safely decide, that in no case is there the slightest reason to confound the ruins of Al Neel, whatever that place may have been, with the remains on the eastern side of the Euphrates, and which I have ventured to call the Palace of Babylon.

I am aware that some people may at first possibly conceive a hasty idea that Al Neel is the town whose existence was supposed by Major Rennel, in order to remove the obstacles to his theory of the change in the course of the river. In the former part of this Memoir I have shown the impossibility of buildings being placed in mounds which are themselves decayed buildings. It is, besides, out of the question to suppose that a town of a size sufficient to require an inclosure like that which I believe to have been the wall of the Palace, and Major Rennel "the rampart of new Babylon," should have been inserted, as it were, in the different hol-

lows and vacant spaces of the ruins, with no reason in the world to choose so awkward and inconvenient a situation; and any villages which may have been placed within the inclosure (like the one we now find there) are obviously of no account. The only situation, as I have already remarked, where a town could have been placed, is either at Hilla or to the north of the Neel.

Before the foundation, or rather augmentation, of Hilla by Seif ud Doulah, A.H. 495, there was a place there, named Al Jamaein, or The two Mosques*. The name Hilla, which was given it after its having been enlarged and fortified, is derived from an Arabic root, signifying to rest, or take up one's abode.

I therefore repeat my belief, formed from the inspection of the ruins about Hilla, that they are of one character, and must be received altogether as a part of Babylon, or wholly rejected without reserve. And I must here state what seems to me to be the best evidence for their antiquity, independent of their appearance, dimensions, and correspondence with the descriptions of the ancients.—The burnt bricks of which the ruins are principally composed, and which have inscriptions

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* Abulfeda.

on them in the cuneiform character, only found in Babylon and Persepolis, are all invariably placed in a similar manner, *viz.* with their faces or written sides downwards. This argues some design in placing them, though what that might have been it is now impossible to say. It, however, proves sufficiently that the buildings must have been erected when the bricks were made, and the very ancient and peculiar form of characters on them in use. When these bricks are found in more modern constructions, as in Bagdad and Hilla, they are of course placed indifferently, without regard to the writing on them. In the greatest depth in the excavations at the Kassr, at the subterraneous passage or canal, I have myself found small pieces of baked clay covered with cuneiform writing, and sometimes with figures indisputably Babylonian:—these shall be described when I come to speak of the Babylonian antiques. Had the ruins been more recent than is here presumed, these inscriptions would not have been found in this order and manner, and we should in all probability have found others in the character or language then in use. Thus, had the town been Mahometan or Christian, we might reasonably expect to meet with fragments of Coufic or Stranghelo. There is another equally remarkable circumstance in these ruins, and which is al-

most conclusive with respect to their antiquity. In the very heart of the mound called the Kassr, and also in the ruins on the bank of the river, which have been crumbled and shivered by the action of the water, I saw earthen urns filled with ashes, with some small fragments of bones in them; and in the northern face of the Mujelibè I discovered a gallery filled with skeletons inclosed in wooden coffins. Of the high antiquity of the sepulchral urns no one will for an instant doubt; and that of the skeletons is sufficiently ascertained, both from the mode of burial, which has never been practised in this country since the introduction of Islam, and still more by a curious brass ornament which I found in one of the coffins. These discoveries are of the most interesting nature; and though it is certainly difficult to reconcile them with any theory of these ruins, yet in themselves they sufficiently establish their antiquity. The two separate modes of burial too are highly worthy of attention. There is, I believe, no reason to suppose that the Babylonians burned their dead; the old Persians we know never did. It is not impossible that the difference may indicate the several usages of the Babylonians and Greeks, and that the urns may contain the ashes of the soldiers of Alexander and of his successors.

I have now done with the eastern ruins.—Major Rennel considers me as the first who established the fact of there being no ruins on the western banks of the river: but Beauchamp states the same fact in the clearest and most positive manner. His words are, "Je me suis soigneusement informé des Arabes dont la profession est d'enlever les bricques de ces ruines pour construire les edifices de Hella, si en creusant la terre de l'autre coté du fleuve, c'est à dire de la rive occidentale du fleuve, on y trouvait des bricques—ils m'ont repondu non*." And he goes so far as to express an opinion that Babylon never occupied both sides of the river—"Je ne suis pas tout-à-fait du sentiment de M. d'Anville, qui partage Babylone de deux cotés du fleuve." (*Mem. de l'Academie des Inscriptions*, v. 48. Notes to M. de Ste Croix's Dissertation on Babylon.) (E.)

It now remains for me to notice the most interesting and remarkable of all the Babylonian remains, viz. the Birs Nemroud.—If any building may be supposed to have left considerable traces, it is certainly the Pyramid or Tower of Belus; which

* It is true, indeed, that Beauchamp speaks only from information which he received from others, and which applies rather to subterranean remains than to ruins on the surface of the earth.

by its form, dimensions, and the solidity of its construction, was well calculated to resist the ravages of time; and, if human force had not been employed, would in all probability have remained to the present day, in nearly as perfect a state as the pyramids of Egypt. Even under the dilapidation which we know it to have undergone at a very early period, we might reasonably look for traces of it after every other vestige of Babylon had vanished from the face of the earth. When, therefore, we see within a short distance from the spot fixed on, both by geographers and antiquarians, and the tradition of the country, to be the site of ancient Babylon, a stupendous pile, which appears to have been built in receding stages, which bears the most indisputable traces both of the violence of man and the lapse of ages, and yet continues to tower over the desert, the wonder of successive generations,—it is impossible that their perfect correspondence with all the accounts of the Tower of Belus should not strike the most careless observer, and induce him to attempt clearing away the difficulties which have been suggested by Major Rennel against its reception within the limits of Babylon. I am of opinion that this ruin is of a nature to fix of itself the locality of Babylon, even to the exclusion of those on the eastern side of the river: and if the

ancients had actually assigned a position to the Tower irreconcileable with the Birs, it would be more reasonable to suppose that some error had crept into their accounts, than to reject this most remarkable of all the ruins. But there is no necessity for either supposition. From the view of the ancient historians I have taken in the foregoing part of this Memoir, it will appear that none of them has positively fixed the spot where the Tower of Belus stood; and if we receive the dimensions of Babylon assigned by the best of the ancient historians—himself an eye-witness—both the Birs and the eastern ruins will fairly come within its limits. Against receiving his testimony we have only our own notions of probability. We have reduced the dimensions merely because they do not accord with our ideas of the size of a city: but we know Babylon to have been rather an inclosed district than a city; and there can of course be no hesitation in abandoning less accurate evidence, and receiving the statement of Herodotus, if there be any traces on the spot to justify it.

The whole height of the Birs Nemroud above the plain to the summit of the brick wall is two hundred and thirty-five feet (235). The brick wall itself which stands on the edge of the summit, and was undoubtedly the face of another stage, is thirty-

seven (37) feet high. In the side of the pile a little below the summit is very clearly to be seen part of another brick wall, precisely resembling the fragment which crowns the summit, but which still encases and supports its part of the mound. This is clearly indicative of another stage of greater extent. The masonry is infinitely superior to any thing of the kind I have ever seen; and leaving out of the question any conjecture relative to the original destination of this ruin, the impression made by a sight of it is, that it was a solid pile, composed in the interior of unburnt brick, and perhaps earth or rubbish; that it was constructed in receding stages, and faced with fine burnt bricks, having inscriptions on them, laid in a very thin layer of lime cement; and that it was reduced by violence to its present ruinous condition. The upper stories have been forcibly broken down, and fire has been employed as an instrument of destruction, though it is not easy to say precisely how or why. The facing of fine bricks has partly been removed, and partly covered by the falling down of the mass which it supported and kept together. I speak with the greater confidence of the different stages of this pile, from my own observations having been recently confirmed and extended by an intelligent traveller*, who is of

* Mr. Buckingham.

opinion that the traces of *four* stages are clearly discernible. As I believe it is his intention to lay the account of his travels before the world, I am unwilling to forestall any of his observations; but I must not omit to notice a remarkable result arising out of them. The Tower of Belus was a stadium in height; therefore, if we suppose the eight towers or stages which composed the Pyramid of Belus to have been of equal height, according to Major Rennel's idea, which is preferable to that of the Count de Caylus (see *Mem. de l'Academie*, vol. xxxi.), we ought to find traces of four of them in the fragment which remains, whose elevation is 235 feet; and this is precisely the number which Mr. Buckingham believes he has discovered. This result is the more worthy attention, as it did not occur to Mr. B. himself.

The Birs Nemroud is apparently the Tower of Belus of Benjamin of Tudela, who says it was destroyed by fire from heaven—a curious remark, as it proves he must have observed the vitrified masses on the summit. M. Beauchamp speaks of it under the appellation of Brouss (F): he never visited it himself; indeed the undertaking is not always practicable without a strong escort. The excellent Niebuhr, whose intelligence, industry, and accuracy cannot be too often praised, suspects the Birs to

have been the Tower of Belus. He gives a very good account of it even from the hasty view which circumstances would allow of his taking: "Au sud ouest de Hellè à 1¼ mille, et par conséquent à l' ouest de l'Euphrate, on trouve encore d'autres restes de l'ancienne Babylone: ici il y a toute une colline de ces belles pierres de murailles dont j'ai parlé; et au dessus il y a une tour qui à ce qui parait est intérieurement aussi toute remplie de ces pierres de murailles cuites; mais les pierres de dehors (qui sait combien de pieds d'épaisseur) sont perdues par le tems dans cette épaisse muraille, ou plutôt dans ces grands tas de pierres: il y a ici et là de petits trous qui percent d'un coté jusqu'à l'autre; sans doute pour y donner un libre passage à l'air, et pour empêcher au dedans l'humidité, qui auroit pu nuire au batiment." (*Voyage*, vol. ii. p. 236.) In this description the Birs may be recognised, even through the obscurity of a job translation.

After this, I was certainly surprised to find that Major Rennel not only excludes it from the limits of Babylon, but even doubts the mound being artificial. So indisputably evident is the fact of the whole mass being from top to bottom artificial, that I should as soon have thought of writing a dissertation to prove that the Pyramids are the work of human hands, as of dwelling on this point. Indeed, were there any

thing equivocal in the appearance of the mound itself, the principles of physical geography utterly forbid the supposition of there being an isolated hill of natural formation in ground formed by the depositions of a river; and therefore, if any traveller fancied he saw a natural hill at Musseil, or any other place in that direction, he was most unquestionably mistaken.

The same reasons prove that there could never have been bitumen springs in Babylon. (See Geog. of Herod. p. 369.) Diodorus, indeed, does not say, as Major Rennel supposes, that bitumen was found in Babylon,—but in Babylonia, which is a very different thing.

The Birs Nemroud is in all likelihood at present pretty nearly in the state in which Alexander saw it; if we give any credit to the report that ten thousand men could only remove the rubbish, preparatory to repairing it, in two months. If, indeed, it required one half of that number to disencumber it, the state of dilapidation must have been complete. The immense masses of vitrified brick which are seen on the top of the mount appear to have marked its summit since the time of its destruction. The rubbish about its base was probably in much greater quantities, the weather having dissipated much of it in the course of so many revolving ages; and,

BRANCH OF THE ASIATIC

possibly, portions of the exterior facing of fine brick may have disappeared at different periods.

In the foregoing observations I have endeavoured to show that the ruins of Babylon in their present state may be perfectly reconciled with the best descriptions of the Grecian writers, without doing violence to either. I feel persuaded that the more the subject is investigated the stronger will the conformity be found; but it is one in which the spirit of system would be peculiarly misplaced: and I am so far from being bigoted to my own opinions, that should I in the course of my researches happen to discover particulars which may reasonably appear to militate against them, I will be the first to lay them before the public.

Bagdad, July 1817.

P.S. Since writing the above I have received an extract from the Supplement to the fifth edition of the *Encyclopædia Britannica*, containing a summary of my former accounts of Babylon, with the author's own ideas on the subject. It is peculiarly gratifying to me to find that my opinions have the confirmation of such a writer.

NOTES.

(A.) Page 7.

If, rejecting the measurements of Ctesias, it be admitted that there was at Nineveh a monument of this very ancient and durable form, I think the remains of it are still to be seen among traces which yet exist of that city. Opposite the town of Mousoul is an inclosure of a rectangular form, corresponding with the cardinal points of the compass; the eastern and western sides being the longest, the latter facing the river. The area, which is now cultivated and offers no vestiges of building, is too small to have contained a town larger than Mousoul; but it may be supposed to answer to the Palace of Nineveh. The boundary, which may be perfectly traced all round, now looks like an embankment of earth or rubbish, of small elevation; and has attached to it, and in its line, at several places, mounds of greater size and solidity. The first of these forms the south-west angle; and on it is built the village of Nebbi Yunus (described and delineated by Niebuhr as Nurica), where they show the tomb of the prophet Jonas, much revered by the Mahometans.

The next, and largest of all, is the one which may be supposed to be the monument of Ninus. It is situated near the centre of the western face of the inclosure, and is joined like the others by the boundary wall;—the na-

tives call it Koyunjuk Tepè. Its form is that of a truncated pyramid, with regular steep sides and a flat top: it is composed, as I ascertained, from some excavations of stones and earth, the latter predominating sufficiently to admit of the summit being cultivated by the inhabitants of the village of Koyunjuk, which is built on it at the north-east extremity. The only means I had at the time I visited it of ascertaining its dimensions was by a cord which I procured from Mousoul. This gave 178 feet for the greatest height, 1850 feet the length of the summit east and west, and 1147 for its breadth north and south. In the measurement of the length I have less confidence than in the others, as I fear the straight line was not very correctly preserved; and the east side is in a less perfect condition than the others. The other mounds on the boundary wall offer nothing worthy of remark in this place. Out of one in the north face of the boundary was dug, a short time ago, an immense block of stone, on which were sculptured the figures of men and animals. So remarkable was this fragment of antiquity, that even Turkish apathy was roused, and the Pasha and most of the principal people of Mousoul came out to see it. One of the spectators particularly recollected, among the sculptures of this stone, the figure of a man on horseback with a long lance in his hand, followed by a great many others on foot. The stone was soon afterwards cut into small pieces for repairing the buildings of Mousoul, and this inestimable specimen of the arts and manners of the earliest ages irrecoverably lost. Cylinders like those of Babylon, and some other antiques, are occasionally found here; but I have never seen or heard of inscriptions. From the assurances given me by the

Pasha of Mousoul, I entertain great hopes that any monument which may be hereafter discovered will be rescued from destruction. A ruined city, as Major Rennel justly observes, is a quarry above ground. It is very likely that a considerable part of Mousoul, at least of the public works, was constructed with the materials found at Nineveh. Koyunjuk Tepè has been dug into in some places in search of them; and to this day stones of very large dimensions, which sufficiently attest their high antiquity, are found in or at the foot of the mound which forms the boundary. These the Turks break into small fragments, to employ in the construction of their edifices. The permanent part of the bridge of Mousoul was built by a late Pasha wholly with stones found in the part of the boundary which connects the Koyunjuk with Nebbi Yunus, and which is the least considerable of all. The small river Khausar traverses the area above described from east to west, and divides it nearly into two equal parts: it makes a sweep round the east and south sides of Koyunjuk Tepè, and then discharges itself into the Tigris above the bridge of Mousoul. It is almost superfluous to add that the mount of Koyunjuk Tepè is wholly artificial.

I hope to make Nineveh the subject of a future Memoir. It is possible that the Larissa of Xenophon, with its pyramid, whose base was one plethron, and height two, was no other than Nineveh with the sepulchre of Ninus (see *Anabasis*, lib. 3).—I cannot quit this subject without remarking a curious coincidence: At Messila, a Median town six parasangs above Larissa, Xenophon saw the base of a wall built of *hewn shelly stone*, Ἦν δὲ ἡ κρηπὶς λίθου ξεστοῦ κογχυλιάτου, κ. τ. λ. At Mousoul I have

seen pieces of this stone, which is a complete conglomeration of small shells.

(B.) Page 8.

When I remarked in my former Memoir that the words of Herodotus, stating the basement story of the Tower of Belus to be σταδιοῦ καὶ τὸ μῆκος καὶ τὸ εὖρος, should be translated "of a stadium in length and breadth" and not "height and breadth," I had not seen Wesseling's edition of Herodotus; by which I find that the reading which makes Herodotus guilty of an absurdity that would reduce him to a level with Ctesias, originated in an error which had long ago been exploded. (Vide Herod. Wess. p. 85, note.)

(C.) Page 17.

Some observations occur here respecting the Palace or Palaces, which ought not to be omitted. In the Geography of Herodotus, p. 355, it is said (from Diodorus) that the lesser palace is on the east, where is also the brazen statue of Belus. Lest it should be conceived that this statement contains some allusion to the Temple of Belus, and consequently be used to establish the position of that building, it is proper to give the whole passage from Diodorus: "In place of the fictile earthen images of beasts (which ornament the walls of the large palace) are here (in the smaller palace) the brazen statues of Ninus and Semiramis, of the prefects, and also of Jupiter who is named by the Babylonians Belus." (Diod. lib. ii. c. 8.)

In the same work, p. 337, Major Rennel, in giving an account of Babylon according to the notions of Herodotus, says: "In the centre of each division of the city is a *circular* space, surrounded by a wall; in one of these stands the royal palace, which fills a large and strongly defended space: the Temple of Jupiter occupies the other." And yet in the "Remarks" he objects to the inclosure which I suppose may have contained the Palace, on account of its being circular. Neither is the description he has given from Herodotus, as quoted above, reconcileable with what he says a little further on, on the authority of Diodorus,—that the Palace was *a square* of 1½ mile. (See Geog. of Herod. p. 354.) But the truth is, that neither does Herodotus mention the circle, nor Diodorus the square. There is certainly no reason to believe that the Palace was of the latter form.

(D.) Page 19.

I must here remark that Tauk Kesra, the palace of the Sassanian kings, is not built of Babylonian bricks, as has been supposed; and that the masonry is strikingly inferior to that of Babylon.

(E.) Page 30.

The same note to the curious and learned Memoir of M. de Sainte Croix contains a discussion concerning the latitude and longitude of Hilla, and its distance from Bagdad, by M. Beauchamp. Niebuhr gives the latitude of Hilla 32° 28′, which would make its distance from Bagdad amount to 21⅓ leagues of 25 to a degree.

M. Beauchamp, from an observation of the transit of Mercury over the sun, on the 5th November 1789, makes it 5 degrees to the west of Bagdad, which he calls being very nearly under the same meridian—"sous le même méridien à très peu près." He is of opinion that the distance given by Niebuhr's observation (22 leagues) is a little too much, because only 18 leagues are reckoned in performing the journey, the whole of the way being over a desert as flat as a table. He says that in two journeys he made from Bagdad to Hilla he counted 16½ hours ordinary pace of a caravan. Niebuhr supposes 13 to 14 German miles, 13½ of which would be just 22½ leagues of 25 to the degree. From this distance, which appears overrated, M. Beauchamp concludes that Niebuhr's latitude is too small: his own observation gave 32° 40′; but he deducts 5′ for the error of his instrument, which error he did not ascertain, but only supposed—he does not say why. This, he says, will be found to correspond better with the reckoned distance. The latitude of Babylon will then, according to him, be 32° 37′. He observes that even if the rate of going of a horseman at a walk be reckoned at one league of 20 to a degree (and which I believe will generally be found to come near the truth), it will bring the latitude of Hilla to 32° 32′ and Babylon to 32° 34′, which comes nearer his observation than that of Niebuhr. (See *Mem. de l'Acad. des Inscr.* vol. xlviii. p. 31.) I hope on my next visit to Babylon to ascertain correctly its longitude and latitude, both by astronomical observations and measurement. In my sketch the magnetic variation was not allowed; it is at Bagdad 8° 44′ west, and at Bussora 9°.

(F.) Page 34.

It appears on examination that the Brouss or Broussa of M. Beauchamp* is no other than the Birs Nemroud (which Major Rennel calls throughout the "Remarks" Nimrod Birs). The situation two leagues south-east of Hilla, and the name, which seems to be only a corrupt pronunciation of Birs or Burs, all sufficiently point out the correspondence between the Birs Nemroud and Brouss. It is true, Beauchamp says it is only one league from the banks of the river; and Major Rennel, in his sketch, makes it rather more than two: but Beauchamp was never at the Birs himself; and he must either speak from mere conjecture, or from the careless report of some person of the country.

Major Rennel says that the Broussa of Beauchamp is called Boursa by the Arabs, and he concludes it to be the Barsita of Ptolemy, or Borsippa of Strabo. It would appear that he has some other authority for *Boursa*, which he does not mention. Boursa in Arabic means a sandy desert, or the dwelling-places of evil spirits, either being very remote from the appellation of Celestial, which d'Anville gives it in fixing it at Samawa, much lower down the Euphrates. In my first Memoir I speak of the ruins of Boursa near the village of Jerbouiya, which is about four leagues below Hilla, and about half an hour from the river. I only met with one man at Hilla who recognised the name of *Boursa*; and he was found out for me by the governor. It is necessary here to explain that I asked for *Boursa* by name, from having

* Geog. of Herod. p. 370. *Mem. de l'Acad.* vol. xlviii.

just read the passage in the Geography of Herodotus relating to it. This I am aware is a mode of inquiry which sometimes in the East leads to error: but whatever may be thought of the *name*, I have no doubt concerning the ruins at Jerbouiya, which I have heard described by several persons who had visited them. Should any one be tempted to imagine, from the similiarity of names, and the conjecture that Boursa is Borsippa, that the ruins at the Birs Nemroud are those of the sacred Tower of the Chaldeans, I can only appeal to the appearance of the Birs itself. To suppose that the Birs is Borsippa, and not Babylon, would be to believe that there existed a Temple and Tower at the former place perfectly resembling the gigantic monument of Belus, both in form and proportions; and that the Temple of Borsippa has resisted the hand of time, which has obliterated that of Babylon.

I must not finish this Memoir without correcting two inaccuracies of my former one. Tahmasia was, I find, built by Shah Tahmas, and not by Nadir Shah, as I was inaccurately informed at Hilla; and the Khan half way between Bagdad and Hilla is not called Khan Bir Yunus, or Jonas's Well, but Bir-un-nous (incorrectly for nisf), *i. e.* The Well of the Half-way.

APPENDIX.

BABYLONIAN ANTIQUITIES.

Having given an account of the ruins of Babylon, it will perhaps be expected that I should describe the monuments of the arts, manners, and religion of past ages which are found among them, and which are as yet but imperfectly known to the public. But to enter fully into this subject would require an attention of which I am not now capable, and time which I have it not in my power to bestow. I must therefore at present content myself with merely offering specimens of some of the most interesting of these fragments: and I console myself with the hope that I may thus supply some materials to those who are infinitely more capable of using them than I can ever expect to be.

Hilla is the general dépôt for antiques found throughout all this country, especially on the banks of the Euphrates, from Rakka to Samawa*. The

* I have even been offered at Hilla English and Russian copper coins, common European seals of false cornelian, and a head of Frederic the Great in blue glass!

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most interesting of these antiques are the Sassanian and Babylonian. It is of the latter only of which I now propose to speak. Most of them contain specimens of the very curious and primitive system of writing found only in the Babylonian monuments; and those of Persia of the age of its history*. The cuneiform, or, as it has sometimes been called, the arrow-headed, character baffled the ingenuity of the decypherer, till Dr. Grotefend of Frankfort, undeterred by the ill success of his predecessors, applied himself to the task with a judgement and resolution which secured success. The result, so creditable to his industry and learning, and the process by which he obtained it, which he very ingenuously submits

* In the first period of the history of Persia I include the whole of its sovereigns down to the extinction of the native race by the Macedonian conquest, without any reference to the fanciful divisions of Ferdusi in his string of romances, which has by some unaccountably been entitled an epic poem, and by others a history. It probably bears the same relation to the ancient history of Persia as the romances of Brute and the acts of Arthur's worthies do to that of Britain. Dr. Grotefend's first efforts have already done something towards maintaining the veracity of the venerable historians of Greece against the fictions of Mohammedan Persian literature; and much more may be expected, provided we can obtain a more intimate acquaintance with the Zend and other ancient languages of Persia, which is an object highly worthy the attention of our learned countrymen in India.

to the public, are to be found partly in Prof. Heeren's work on the Politics, Intercourse, and Commerce of the principal Nations of Antiquity*, and partly in the fourth and fifth volumes of the *Mines de l'Orient*; but it is to be hoped that he will soon be prevailed upon to communicate to the world his valuable labours in a separate and more perfect form.

Dr. Grotefend, who professes to be rather the decypherer than the translator of the cuneiform inscriptions, and who engages merely to open the way to those whose attention has been much devoted to the study of the ancient languages of Persia, has however succeeded in translating some of the inscriptions on the ruins of Persepolis, and one from those of Pasargadæ. He observes that there are three varieties of those inscriptions, distinguished from each other by the greater complication of the characters formed by the radical signs of a wedge (or arrow) and an angle. Each inscription is repeated in all the three species. The first or simplest species decyphered by Dr. Grotefend is in Zend, the language of Ecbatana; and there are grounds for believing that the remaining ones are translations

* *Ideen über die Politik, den Verkehr und den Handel der vornehmsten Völker der alten Welt*, by Prof. A. H. L. Heeren, 3d edition, Gottingen, 1815,—a very interesting work, which ought to be translated into English.

into the languages of the other capitals of the Persian empire, Susa and Babylon. This conjecture acquires force from the fact of one of the species of cuneiform writing discovered at Babylon corresponding, or nearly so, with one of the Persepolitan species.

The cuneiform is the most ancient character of which we have any knowledge. It is difficult to say in what country it was invented; but its use was common to the great nations of antiquity, the Median, Persian, and Assyrian; and, as Prof. Heeren very justly observes, it is in all likelihood the *Assyrian writing* of Herodotus, and that which Darius Hystaspis engraved on the pillars which he set up on the banks of the Bosphorus. The inscriptions decyphered by Dr. Grotefend are of the times of Cyrus, Darius Hystaspis, and Xerxes. Notwithstanding the obscurity in which its history is involved, it is not difficult to fix the period in which it fell into disuse. From its peculiar form it is evident that it must have been confined, like the sacred character of the Egyptians, to inscriptions on stone and other hard substances; and there must consequently have been another mode of writing better calculated for ordinary use, which probably resembled the Zend character of Anquetil-Duperron. The sacred or lapidary character must have fallen into

disuse upon Alexander's conquest, when neither the Persians nor Babylonians had any monuments to erect or events to record. The native princes who wrested the throne of Persia from his feeble successors adopted the Greek language and character in their coins and inscriptions; and all recollection of the cuneiform writing must have perished during the long period in which they held the sceptre of Iran. The Sassanians, the professed restorers of the ancient rites and usages of Persia, could not therefore have had it in their power to recall the use of this obsolete mode of writing; and accordingly we find the monuments and coins of that dynasty inscribed with a character having an analogy with the Hebrew, Phenician, or Palmyrene, which has been decyphered by the first orientalist of any age or country, in whose excellent work, "*Mémoires sur diverses antiquités de la Perse,*" the fullest information on the Sassanian antiquities may be found.

The foregoing observations relate to the Persepolitan inscriptions. With respect to those of Babylon, Dr. Grotefend, from the scarcity of specimens, is yet only acquainted with two kinds; and he has not attempted to decypher them, though he has furnished some useful tables of comparison for those who may be inclined to attempt the task*.

* See *Mines de l'Orient*, vol. iv. and v.

Adopting his principles of classification, I shall divide the Babylonian inscriptions into three species, in the order of their complication. I have attempted to account for the coexistence of three different writings and languages in the Persepolitan inscriptions. For the reason of there being three species of Babylonian writing, of which one only corresponds with those of Persepolis, I cannot offer any probable conjecture. They are never found together, or in the same antiques, as in Persia; but the supposition of different ages will not solve the difficulty. A strict comparison of the different kinds will show whether or no they express different languages *.

No. 1 is a black stone of an irregular shape (in part broken and defaced), about one foot in length and 7½ inches in breadth. The figures on it, *a* and *b*, have been supposed to represent the zodiac of the Babylonians: *c* is all that is now legible of the inscription, which once covered the lower part of the

* In the moment of sending off this Memoir I saw a letter from Dr. Grotefend, by which it appears that that learned and ingenious person, from a close examination of some specimens which have recently been communicated to him, is of opinion that the three species of Babylonian writing here spoken of are only varieties of different modes of writing the same characters, and that there is in fact but one real kind of Babylonian cuneiform writing. Those who consider the importance of the undertaking will rejoice to learn that Dr. Grotefend is prosecuting his inquiries with unremitting ardour.

stone, and is in the first species of Babylonian cuneiform writing. I saw an antique perfectly resembling this in the Royal Library at Paris, and I believe it has been described by Mr. Millin and noticed by Dr. Grotefend. This stone was brought to me by a peasant while I was examining the ruins of Babylon.

No. 2 is a stone two feet in length, nineteen in breadth, and nine inches in thickness: it is broken at the bottom. On the front is the sculpture *a*, and on the right side the inscription *b* belonging to the first species.

No. 3 is a head of red granate, a little larger than the drawing. It contains the inscription *b*, which is somewhat defaced, but which also appears to be of the first species. The antique *c* is a brass ornament which I found in a coffin with a skeleton in the Mujelibè, and is introduced here for the purpose of comparison with *a*. Both appear to have been destined for the same use; and in place of the ring or shank by which the brass ornament was suspended, there is a hole drilled through *a*. The age of *b* is sufficiently evident from its character and appearance; and that of *a* is placed beyond all doubt by the cuneiform inscription: from both, the antiquity of the skeleton may be inferred. *a* was brought to me at Bagdad from Hilla, but I have not been able to discover in what part of the ruins it

was found. The first species of Babylonian cuneiform writing agrees with the third Persepolitan.

No. 4 is an inscription copied from a piece of baked clay, in shape like a barrel, being thicker in the centre than at the ends. It is $4\frac{3}{4}$ inches long and $1\frac{1}{2}$ in diameter. The inscription is perfect, and the lacunæ which are seen in the copy are not illegible places, but exist in the original. The character is in the second species of cuneiform writing, of which no specimen has hitherto been published. This species also occurs on small pieces of baked clay of a darker and finer quality than the bricks; they are generally covered with writing, and have also sometimes figures on the edges in slight relief. I found some of these pieces of clay in the sewer or subterranean canal at the foundations of the Kassr, the antiquity of which is thus in some measure established. To ascertain in what particular part of the ruins each antique is found, is a curious and important subject of investigation; but one which the little reliance that can be placed on the words of the natives, and the extraordinary manner in which they sometimes deceive without the slightest apparent motive, render very difficult. I shall, however, never lose sight of it.

No. 5 is a small piece of clay of this size, which contains an inscription only on one side. The writ-

ing is of the second species, and the letters slope a little, which is frequently the case in inscriptions of this kind.

I have lately received a small piece of brick of a very fine quality, with a varnished surface, from Mousoul. It was found among the ruins of Nineveh, and contains an inscription in cuneiform letters so minute and difficult to read that I have not yet been able to determine to what class it is to be assigned.

The third class of Babylonian writing is that found on the bricks and cylinders. The Babylonian bricks have been described in other places, and some specimens of them are already before the public. The antiquary is aware that the custom of stamping letters on bricks was not peculiar to Babylon, and that examples of it occur in the ruins of Greece. Among the scanty remains of Seleucia on the Tigris I found numbers of bricks with impressions on them; but from the coarseness of the materials and inferiority of workmanship I have never been able to discover any writing. The stamps with which the bricks of Babylon are impressed, are on the contrary cut very neatly and applied with care; and even some precaution appears to have been taken to preserve the writing, for they are all placed with their faces or written part downwards; and what is very remarkable, when laid in bitumen,

that cement is never found adhering to the face, though it always sticks to the back of the brick. The people employed in the ruins of Babylon to procure bricks, told me that this was effected by strewing some powdered lime over the bitumen when the brick was laid on its face in it; but I know not what authority they have for this opinion. In my first Memoir I doubted that reeds had ever been employed where bitumen was used; I have since seen some bricks with bitumen adhering to them, on which the impression of a reed mat was so strongly marked as to induce me to change my opinion.

The number and variety of the stamps bear no proportion to the number of the bricks. I have as yet only seen four kinds, with some varieties of each.

No. 6 is an inscription of seven lines, of which Dr. Grotefend has only seen an imperfect copy. Septilinear inscription is the most common of all: out of nineteen bricks taken at random, fourteen were of this sort. There are several varieties of this kind, differing from each other only in a character or two.

No. 7 is an inscription of six lines. The specimen here given is remarkable by deviating in many places from the other kind of brick inscriptions, especially in the omission of almost the whole series

of characters which forms the fifth line in the septilinear inscriptions.

No. 8 is an inscription of three lines. One of this kind has been seen by Dr. Grotefend, from which this specimen differs a little.

No. 9 is an inscription in four lines, which is the rarest kind of all, and no specimen of it has ever been published.

The Babylonian cylinders are among the most remarkable and interesting of the antiques. They are from one to three inches in length: some are of stone, and others apparently of paste or composition of various kinds. Sculptures from several of these cylinders have been published in different works; and Nos. 10, 11, 12, 13 and 14 are specimens of my own collection. Some of them have cuneiform writing on them (as in Nos. 12 and 13) which is of the third species; but has the remarkable peculiarity that it is reversed, or written from right to left, every other kind of cuneiform writing being incontestably to be read from left to right. This can only be accounted for by supposing they were intended to roll off impressions. The cylinder No. 11 was found in the site of Nineveh. I must not omit mentioning in this place, that a Babylonian cylinder was not long ago found in digging in the field of Marathon, and is now in the possession of Mr. Fauvel of Athens.

The cylinders are said to be chiefly found in the ruins at Jerbouiya. The people of this country are fond of using them as amulets, and the Persian pilgrims who come to the shrines of Ali and Hossein frequently carry back with them some of these curiosities.

Small figures of brass or copper are also found at Babylon. No Babylonian coins have as yet been discovered, nor have I ever seen any Darics brought from Hilla. The true Babylonian antiques are generally finished with the utmost care and delicacy, whilst the Sassanian (which may possibly form the subject of a further Memoir) are of the rudest design and execution.

THE END.

LONDON:

PRINTED BY RICHARD AND ARTHUR TAYLOR.

00088392

Digitized with financial assistance from the
Government of Maharashtra
on 28 September, 2015